Brickcom

36x Speed Dome Network Camera

OSD-040 36x Series

User's Manual

Brickcom

Product name:	Network Camera (OSD-040 36x series)
Release Date:	2011/01
Manual Revision:	V1.0
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Before You Use This Product

In many countries, there are laws prohibiting or restricting the use of surveillance devices. This Network Camera is a high-performance, web-ready camera which can be part of a flexible surveillance system. It is the user's responsibility to ensure that the operation of this camera is legal before installing this unit for its intended use.

Upon opening the product's package, verify that all the accessories listed on the "Package Contents" are included. Before installing the Network Camera, read the warnings in the "Quick Installation Guide" to avoid misuse. When installing the Network Camera, carefully read and follow the instructions in the "Installation" chapters to avoid damages due to faulty assembly or installation.

Regulatory Information

Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

IMPORTANT NOTE:

FCC Radiation Exposure Statement:

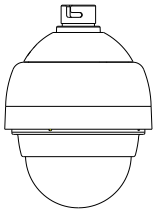
This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

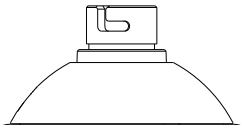
The availability of some specific channels and/or operational frequency bands are country dependent and are firmware programmed at the factory to match the intended destination. The firmware setting is not accessible by the end user.

Chapter 1 - Package Contents

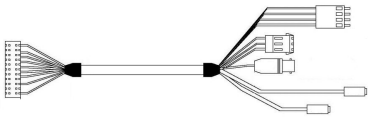
a. Network Camera (OSD-040 36x)



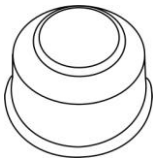
b. Mount Kit



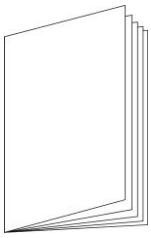
c. I/O Cable



d. Waterproof Rubber

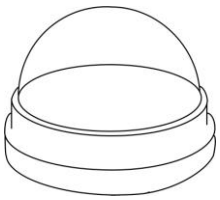


e. Warranty Card / Easy Installation Guide

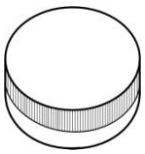


f. M5 Screw

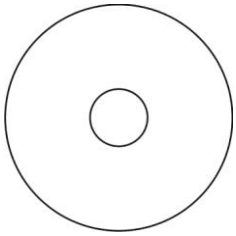
g. Dome Cover



h. Lubricant



i. Product CD



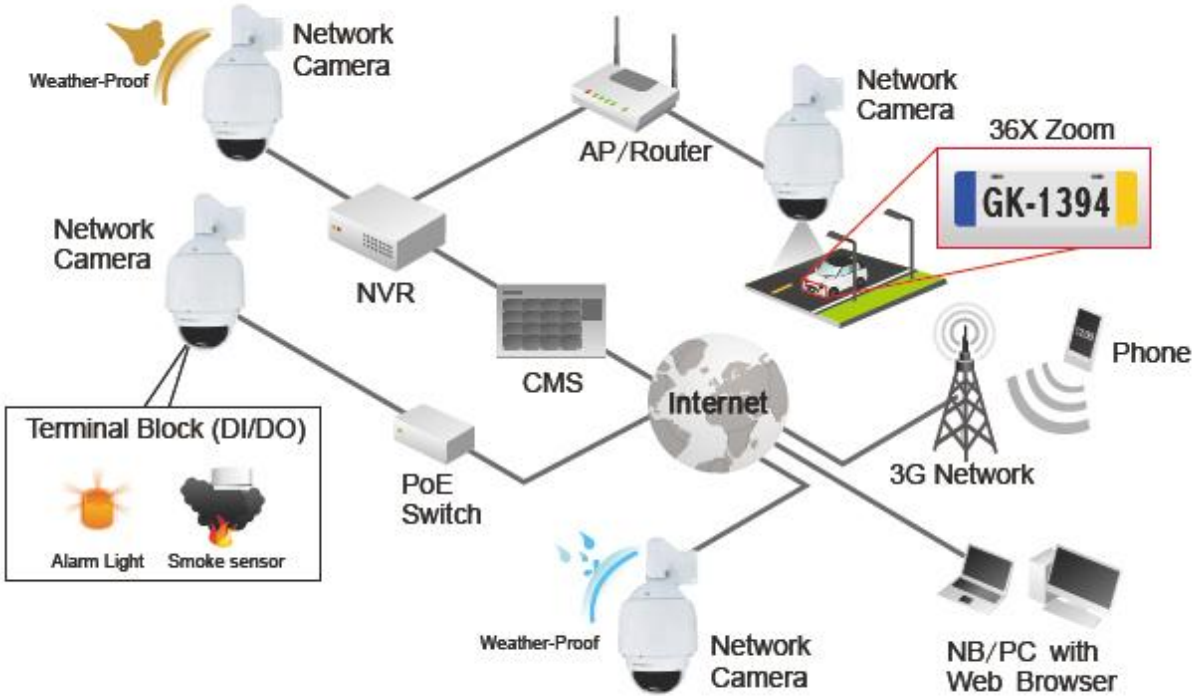
j. Screw for Dome Cover

Chapter 2 - 36x Outdoor Speed Dome Network Camera Overview

The Brickcom OSD-040 36x series is a high-end, Speed Dome network camera designed to provide high-quality video surveillance for outdoor environments. By offering H.264/M-JPEG/MPEG-4 triple codec compression, it is able to provide a flexible system which does not require high bandwidth or storage capabilities.

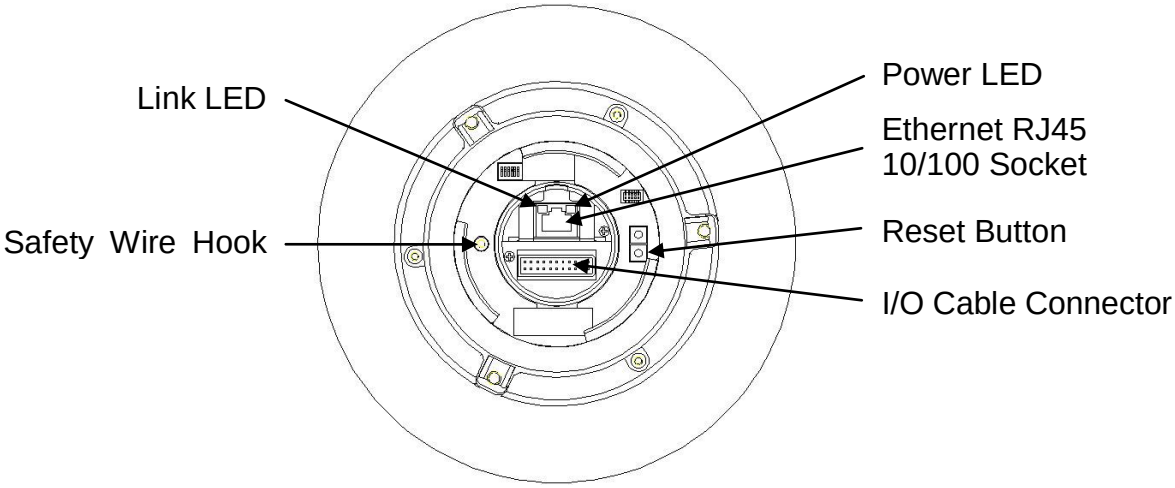
The advanced features of the OSD-040 36x series work together to create crystal-clear video surveillance. By adopting a powerful 36x optical zoom lens with auto focus, it can easily provide clear close-up shots of objects. The Sony Super HAD II CCD sensor with Effio DSP(Digital Signal Processor) and removable IR-cut filter significantly improve the light sensitively of the OSD-040 36x series, providing excellent surveillance in both day and night settings. When its Wide Dynamic Range (WDR) sensor, the camera can handle extreme variations of brightness within the same sense. The WDR sensor averages out the very bright and very dark areas to create a more even evenly exposed video scene which is close to what the human eye would see.

Along with high-level sensors, the OSD-040 36x series is equipped with a fast and precise pan/tilt mechanical design. The 360^{o} continuous pan and -10^{o} ~190^{o} tilt combine with a rotation speed of 0.5^{o} ~400^{o} per second to provide complete coverage of every angle. With such powerful pan, tilt and zoom capabilities and a weather-proof casing (IP66), this camera is perfect for environments where precision and reliability are key; such as railway stations, airports, warehouses, and production facilities.

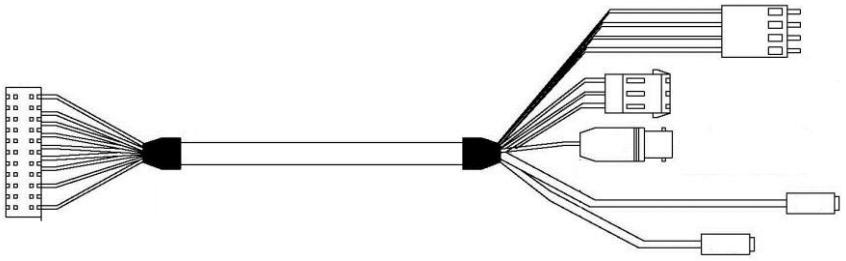

Weather-Proof
Network Camera
AP/Router
Network Camera
36X Zoom
GK-1394
Network Camera
NVR
CMS
Internet
Phone
Terminal Block (DI/DO)
Alarm Light
Smoke sensor
PoE Switch
3G Network
Weather-Proof
Network Camera
NB/PC with Web Browser

Chapter 3 - Device Appearance Description

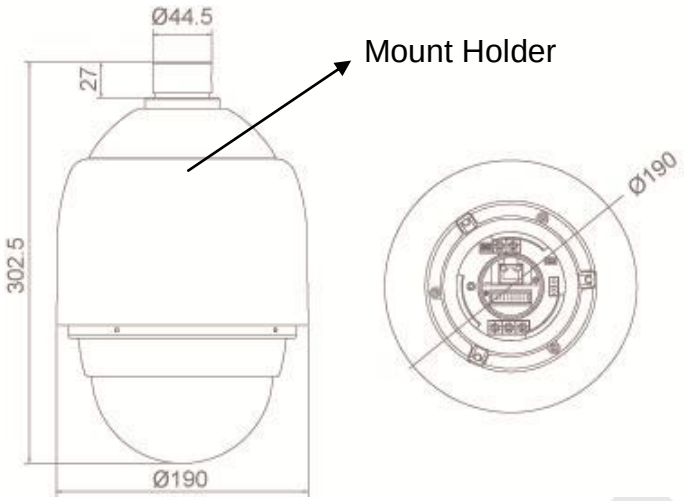
< Bottom View >



< I/O Cable >



< Dimension >



Chapter 4 - LED Behavior

Function	LED Behavior	Description
Power LED	Continuous illumination	Power on
Power LED	Unit	Power off
Link LED	Continuous illumination	Link
Link LED	Blinking	Connecting

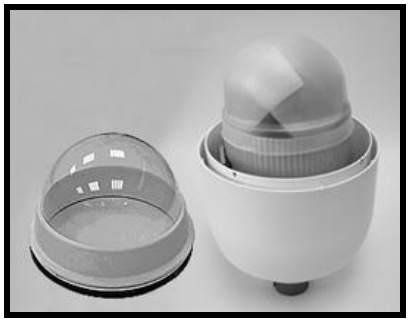
Chapter 5 - Installation

5.1 Hardware Installation

A. Before Installation

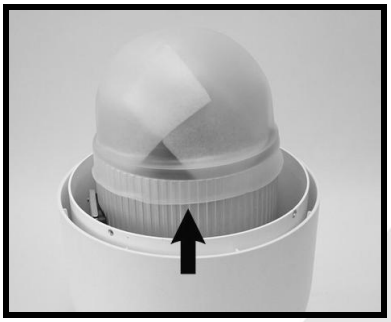
The SD-040 36x is supplied with a dome cover to protect the camera unit. Before installation, follow these instructions to attach the dome cover and remove the mount holder.

1) Unpack the dome package and take out the Dome body.



2) Rotate the mount holder and take it off the Dome body.

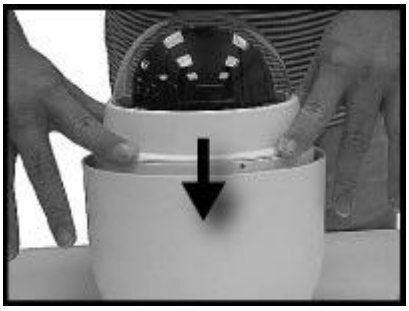
3) Remove the protective cover and PE sheet.



4) Apply lubricant to the Dome cover's water-proof rubber to make the installation process smoother.

NOTE - The tiny *protrusion* on the dome cover must align with one of the four holes on the dome body.

5) Attach the Dome cover to the Dome body by gently pressing down on the sides of the Dome cover with both hands.

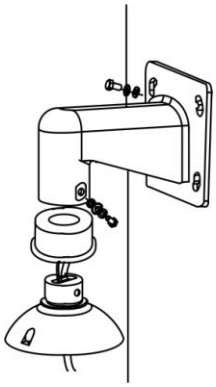


NOTE - DO NOT press the cover from the top as this may cause damage to the Dome body.

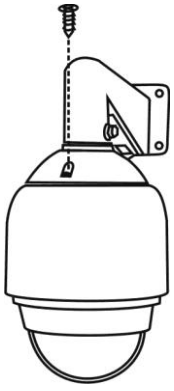
6) Screw the Dome cover and body together.

B. Install Camera with Mount Kit

1) Make a cable entry hole on the wall/ ceiling to insert the cable(s).
2) Mount the Speed Dome camera according to the “Speed Dome Mounting Accessories Installation Guide”.
3) Attach the waterproof rubber to the selected mount kit.
4) Route the Ethernet and I/O cables through the top holder and join the selected mount kit with supplied screws and washers. Then adjust the Waterproof Rubber over the joint.
5) Connect the Ethernet and I/O cables and hook the safety wired to the camera.
6) Attach the camera to the top cover with the supplied screw and washers.



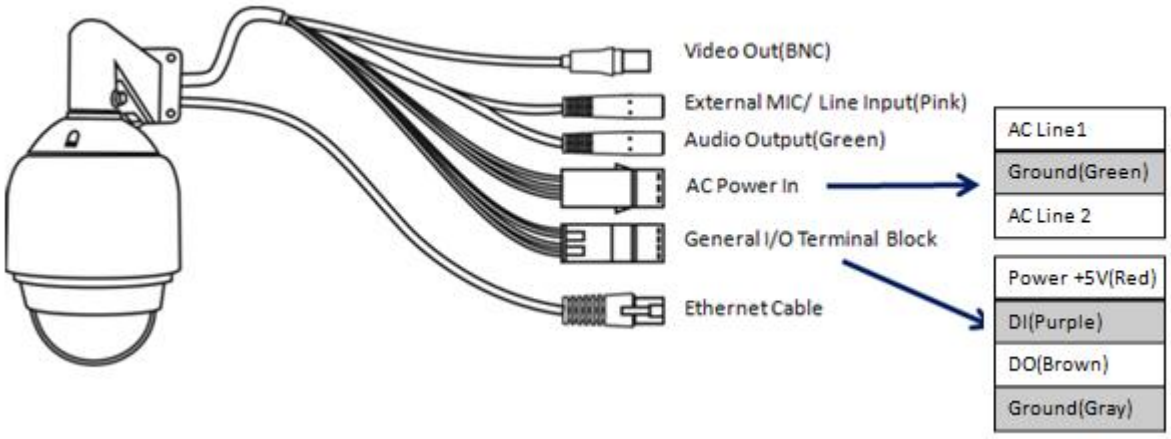
Wall Mounting: Pendant Mount (mounting example)



NOTE - Refer to the mounting instruction in the “Speed Dome Mounting Accessories Installation Guide” for more details.

5.2 Camera Connection

1) Connect the camera to a switch using an Ethernet cable.
2) Connect supplied I/O cable to the camera.
3) To attach external devices, such as sensors and alarms, connect them to the extension I/O terminal block.



5.3 System Requirements

Operating System:
Microsoft Windows XP Home Edition SP2
Microsoft Windows XP Professional SP2

Computer:
IBM PC/AT Compatible

CPU:
Pentium 3GHz or faster

Memory:
1024 MB or more

Monitor:
1024 x 768 pixels or more, 24-bit True color or better

Network Interface:
10/100Mbps Network interface card must be installed

Web Browser:
Microsoft Internet Explorer 6.0 SP2 or higher

Adobe Reader:
Adobe Reader 8.0 or higher

Audio:
The audio function will not work if a sound card is not installed in the PC. Audio may be interrupted depending on network traffic.

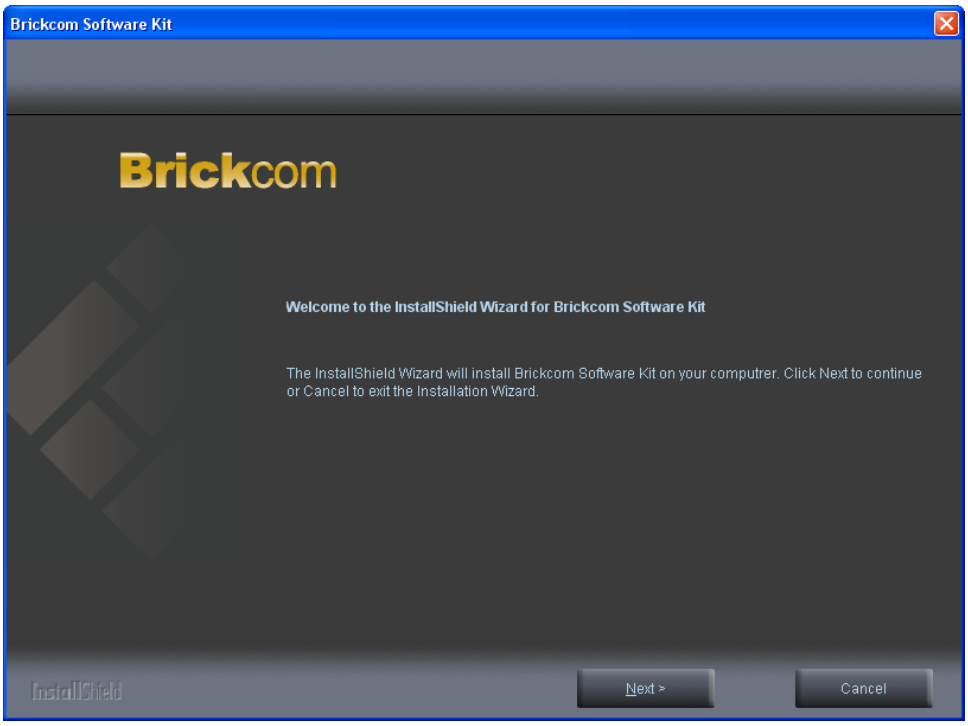
5.4 Software Installation

In this manual, "User" refers to whoever has access to the Network Camera, and "Administrator" refers to the person who can configure the camera and grant user access to the camera.

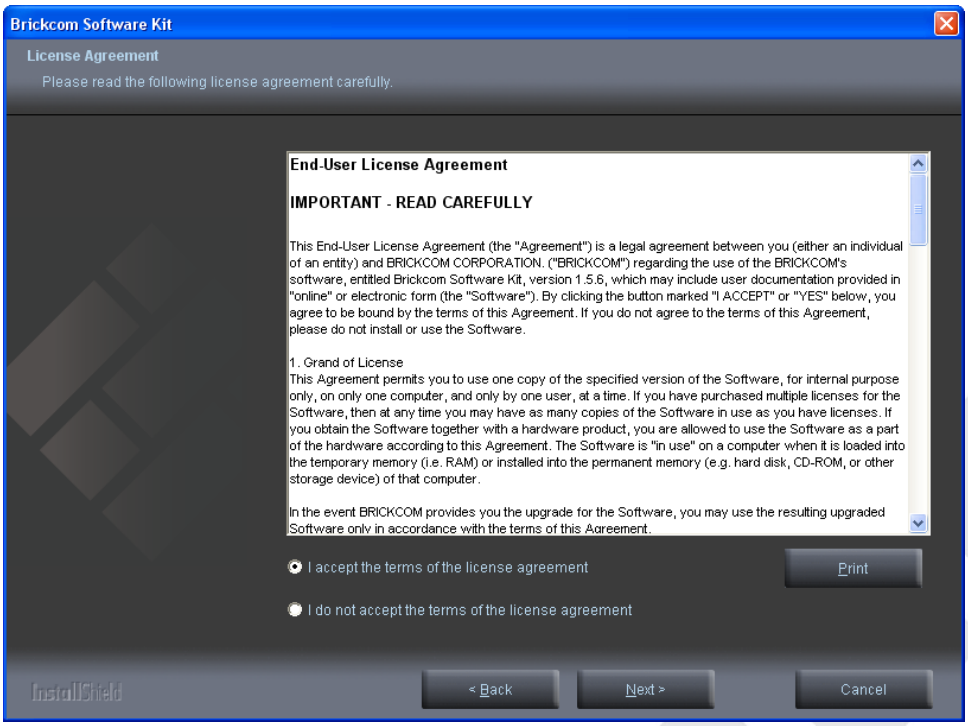
After checking the hardware connection, run the Installation Wizard program included on the product's CDROM to automatically search the intranet for the camera. There may be many cameras on the local network. Differentiate the cameras using the serial number which is printed on the labels on the carton and the bottom of the camera.

A. Insert the Installation CD into the CD-ROM driver. Run Auto-Run Tool directly from the CD-ROM to start the installation. When installing the Brickcom software kit for the first time, select a desired language for the interface. The available languages are listed in the scroll box. Click <**Install**> and follow the steps to install the EasyConfig wizard on the desired computer.

B. In the Install Shield Wizard dialog box, click <Next> to continue.



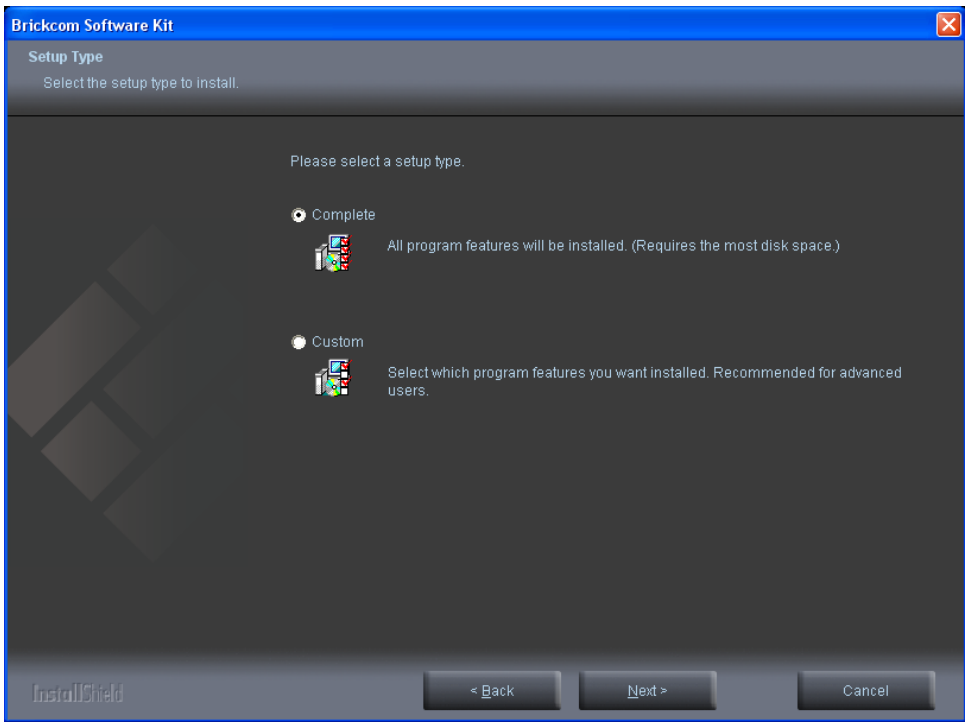
C. Read the End-User License Agreement and check the option “I accept the terms of the license agreement”. Click <Next> to continue.



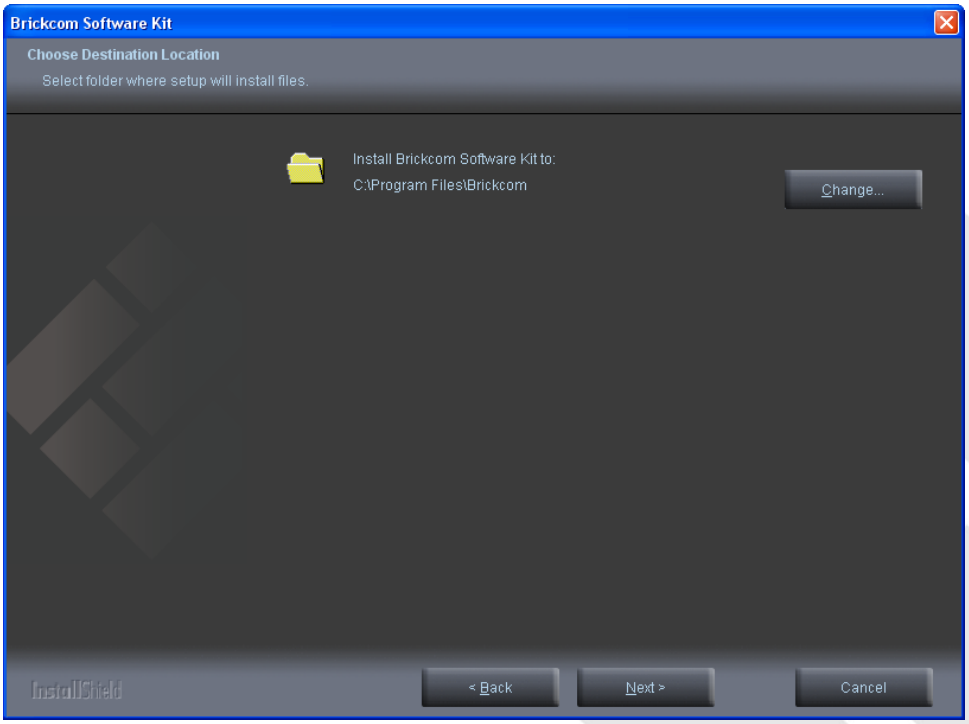
D. Select either “Complete” setup or “Custom” setup to install the system.

a. If COMPLETE SETUP is selected:

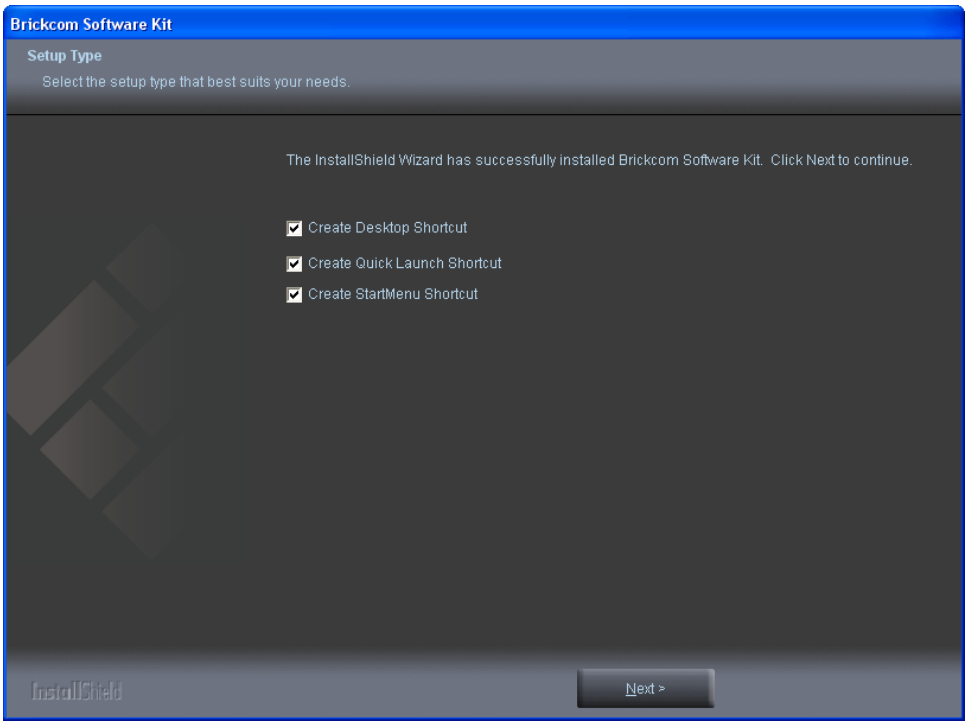
i. **All program features** will be installed into the default directory. Check the option “**Complete**” and then click <Next>.



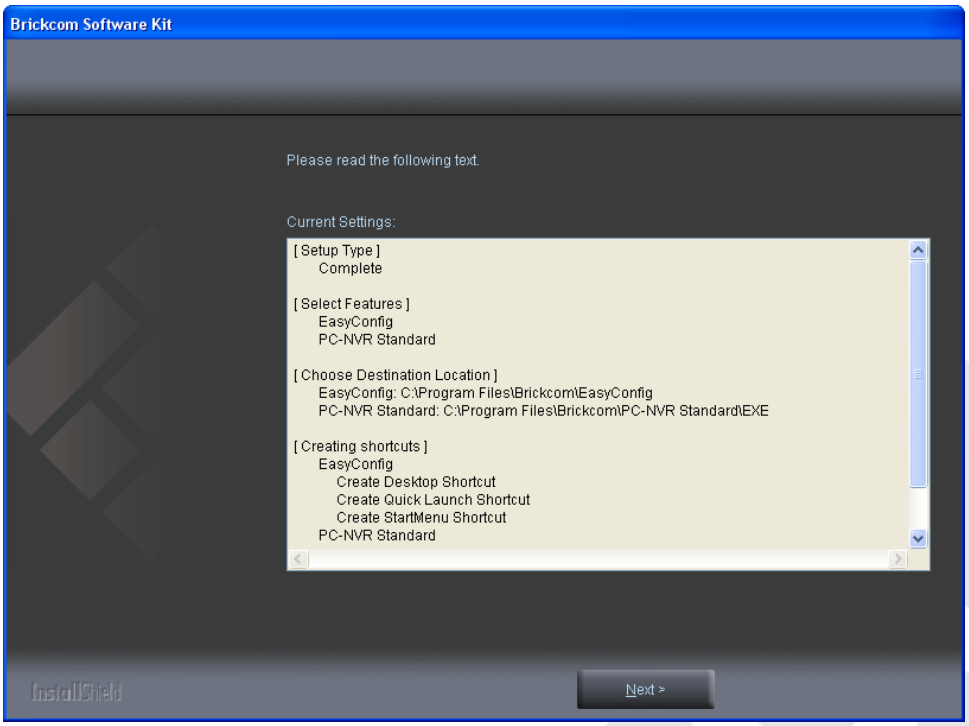
ii. Click <Change> to change the appointed folder where installation and program files will be stored. Click <Next> to continue.



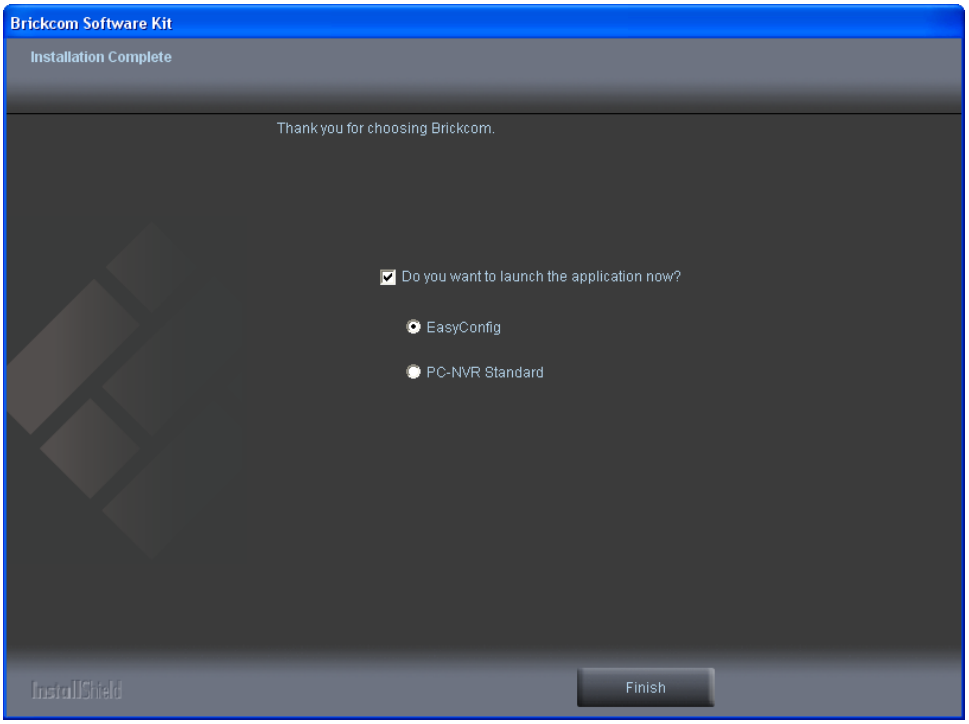
iii. Select to create shortcuts. Click <Next> to continue.



iv. The installation information will be displayed. Click <Next> to continue.



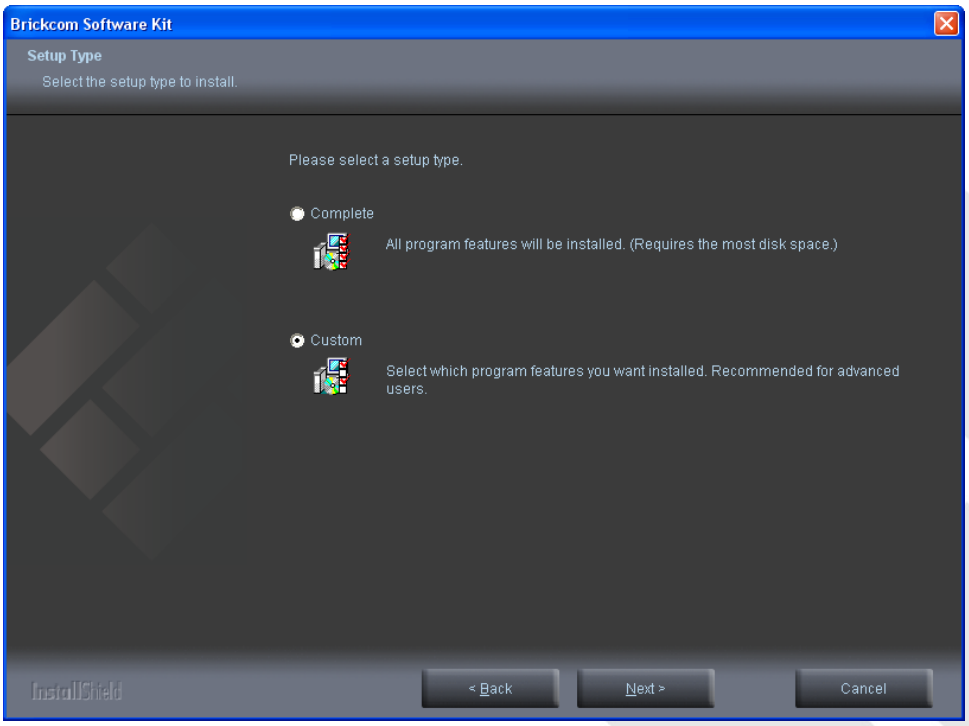
v. To launch EasyConfig or PC-NVR Standard, select the application and click <Finish>. When launching the PC-NVR program, please refer to the PC-NVR user manual.



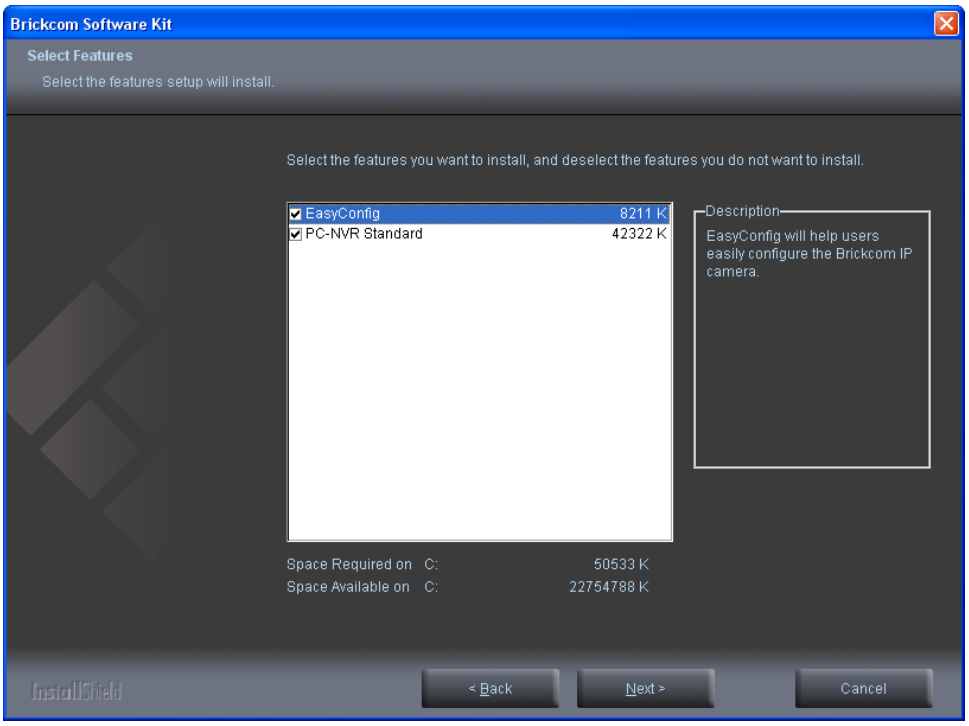
b. If CUSTOM SETUP is selected:

i. This option is recommended for advanced users. It can be used to install the system to a preferred directory or to select specific program feature(s).

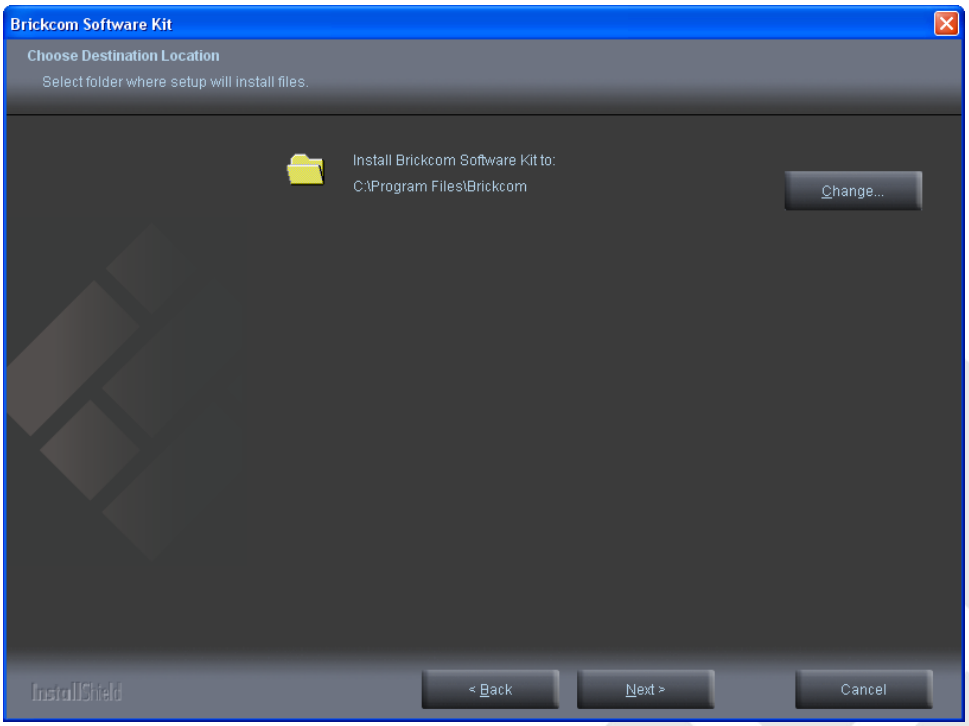
ii. Check the option “Custom”, and then click <Next>.



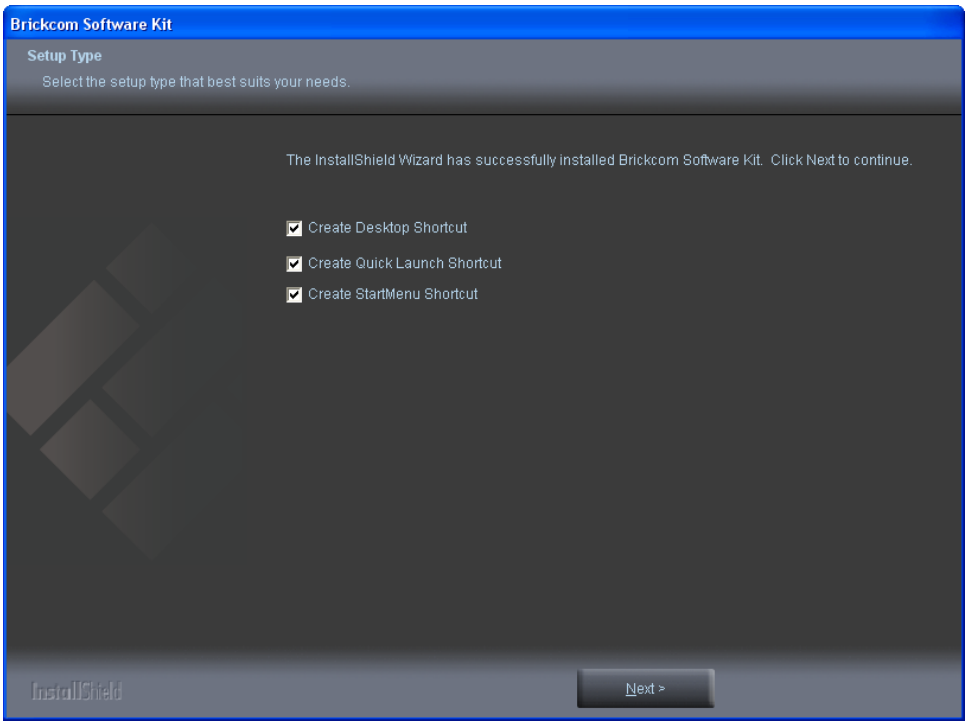
iii. Select the features to install. Click <Next> to continue.



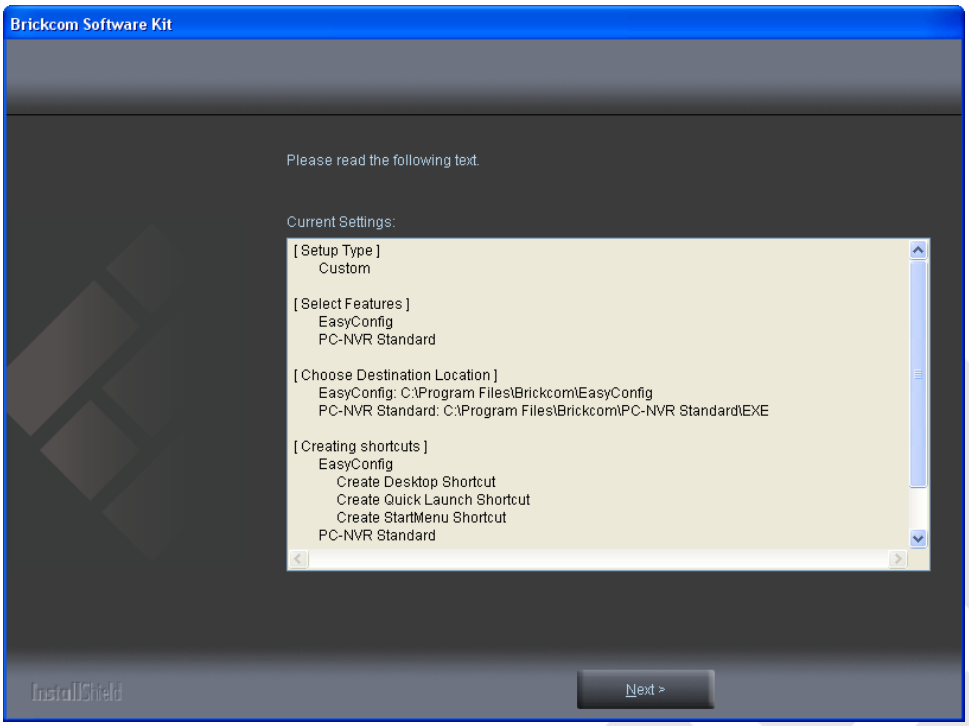
iv. Click <Change> to change the appointed folder where installation and program files will be stored. Click <Next> to continue.



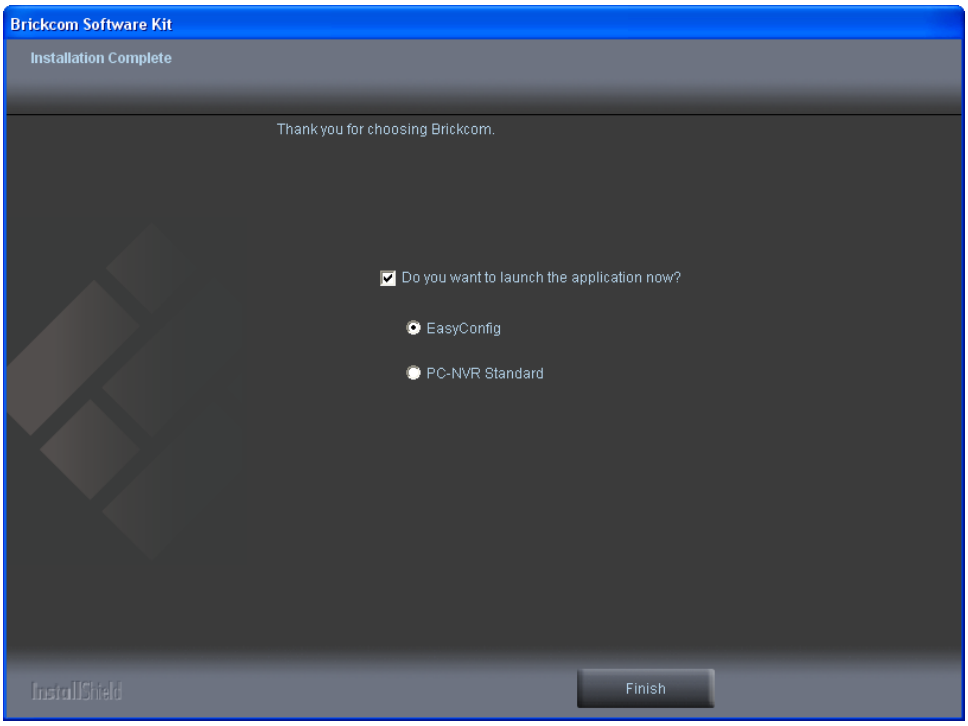
v. Select programs to create shortcuts. Click <Next> to continue.



vi. The installation information will be displayed. Click <Next> to continue.



E. To launch EasyConfig or PC-NVR Standard, select the application and click <Finish>. When launching the PC-NVR program, please refer to the PC-NVR user manual.



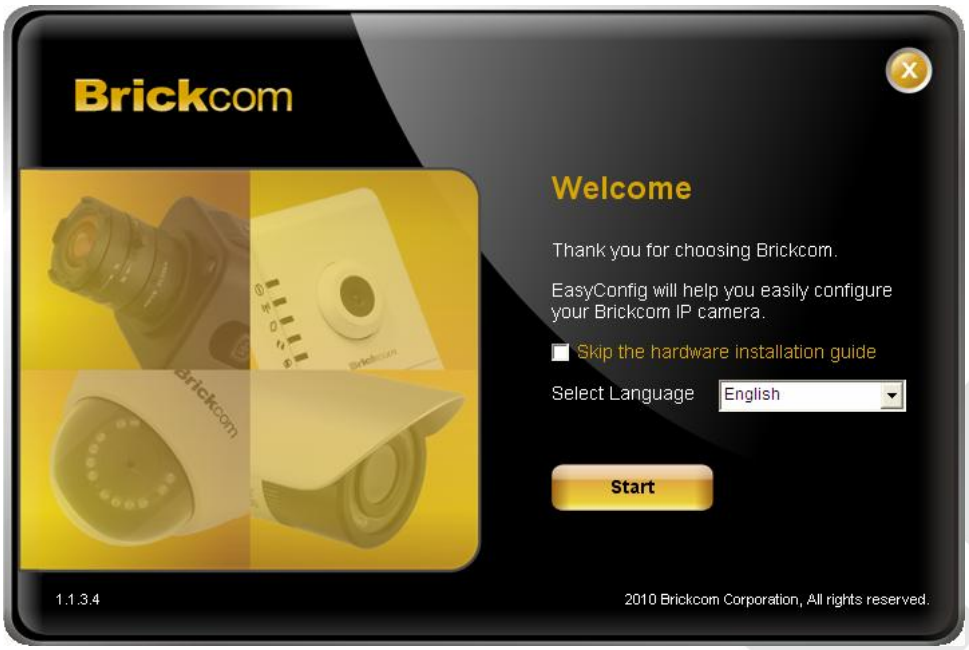
5.4.1 EasyConfig

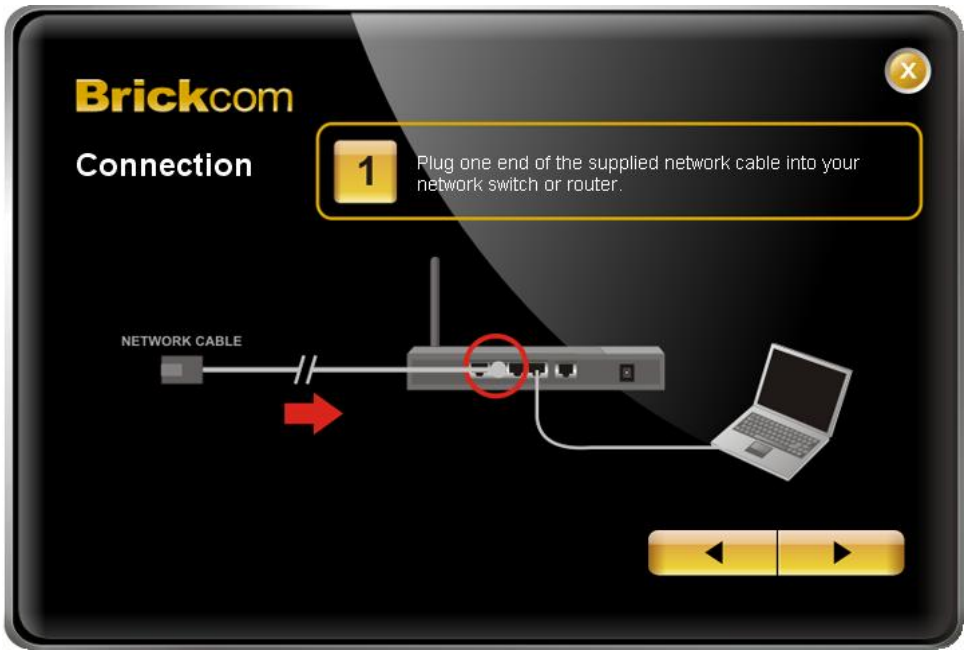
To launch EasyConfig, select EasyConfig from the start menu. If Complete Setup type was used in the software installation, an EasyConfig icon was installed on the desktop. Double click to open the icon.

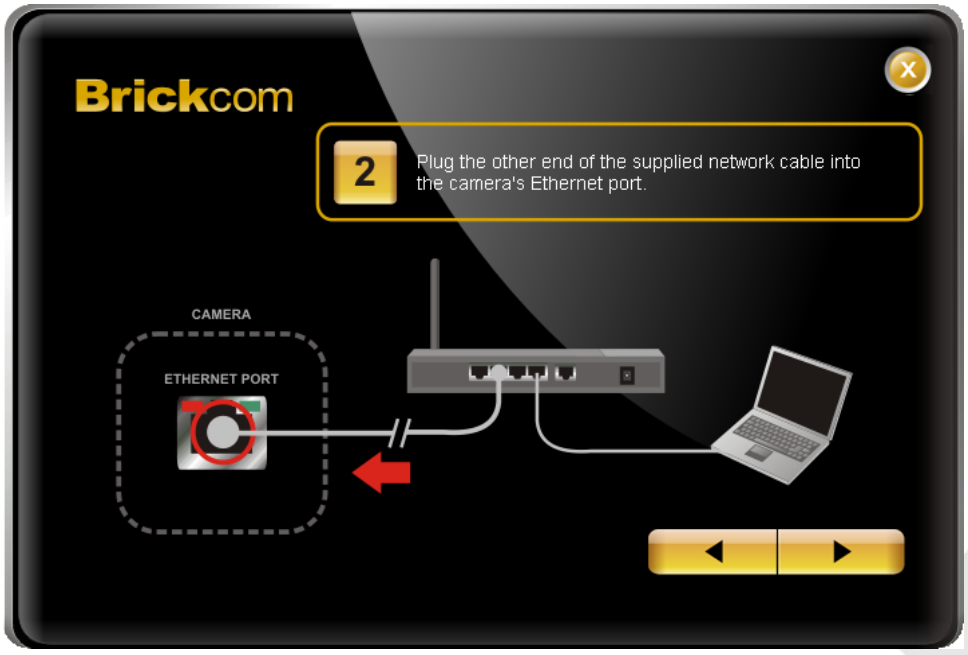
If Custom Setup type was used in the software installation and an EasyConfig icon was not installed on the desktop, the program will be installed under C:\Program Files\Brickcom\EasyConfig unless the program was saved to a preferred directory.

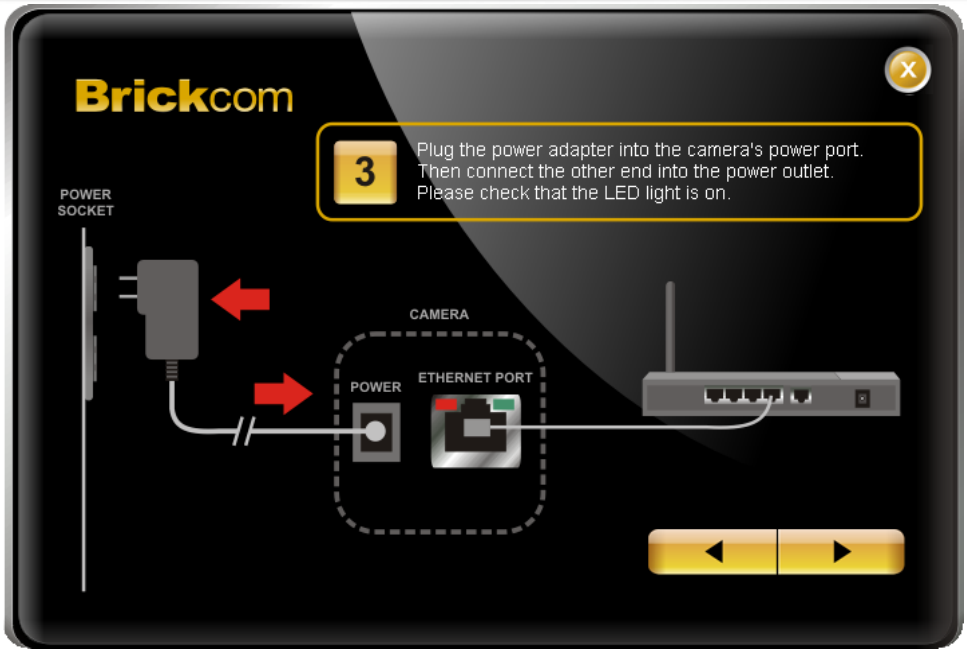
A. Click <Start> to continue. The program will automatically search for the camera in the intranet.

NOTE - Check “Skip the hardware installation guide” to skip checking the hardware connection. To check the hardware installation settings, do not check the option box.

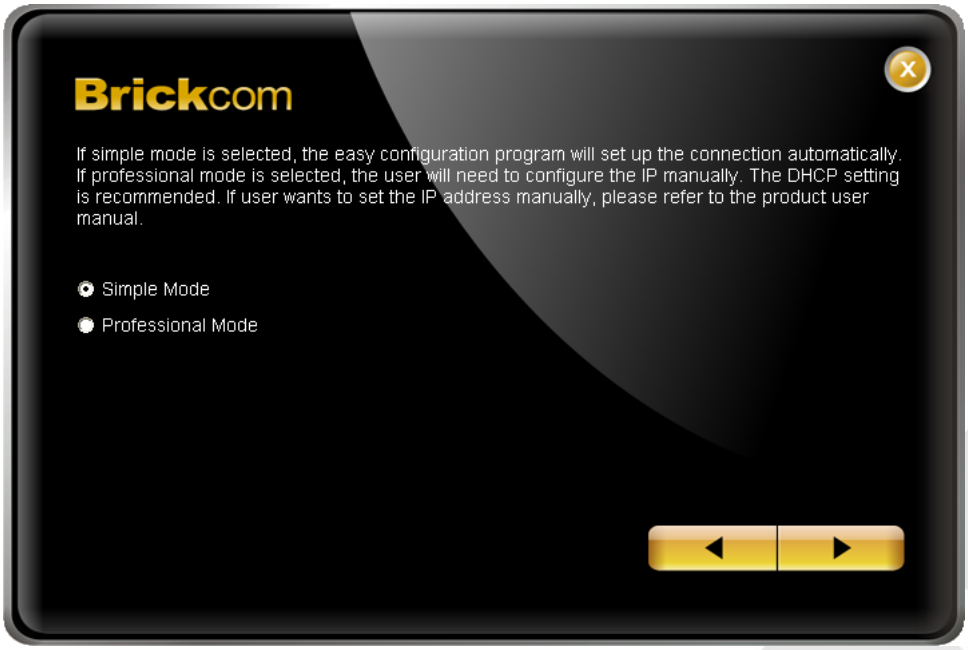



Brickcom
Connection
1
Plug one end of the supplied network cable into your network switch or router.
NETWORK CABLE

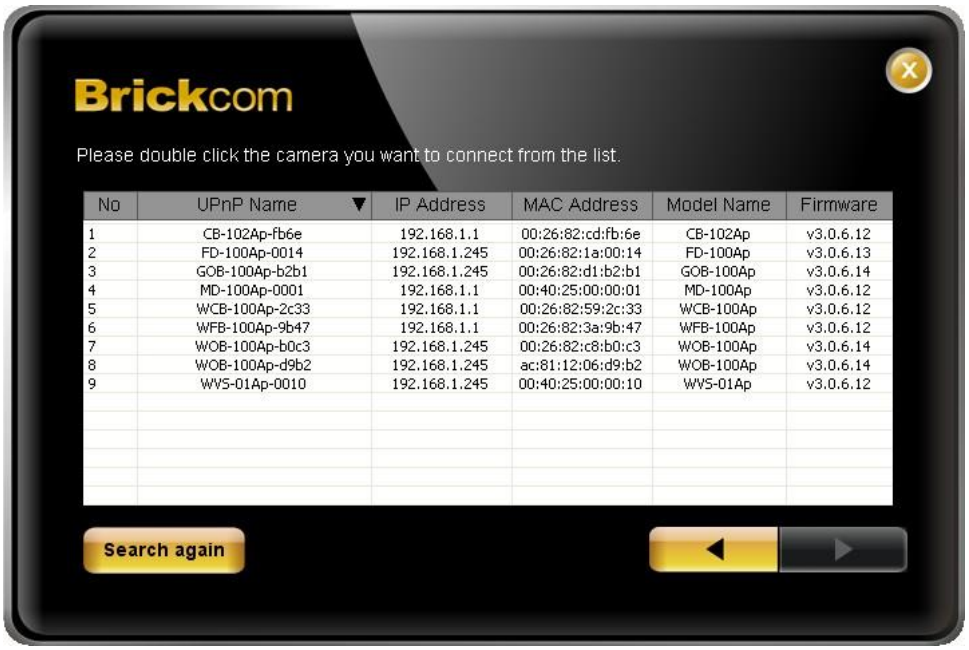

Brickcom
2
Plug the other end of the supplied network cable into the camera's Ethernet port.
CAMERA
ETHERNET PORT



B. Select either “Simple Mode” or “Professional Mode” to obtain the camera’s IP settings. If “Simple Mode” is selected, EasyConfig will set up the connection automatically. If “Professional Mode” is selected, the user will need to configure the IP settings manually.

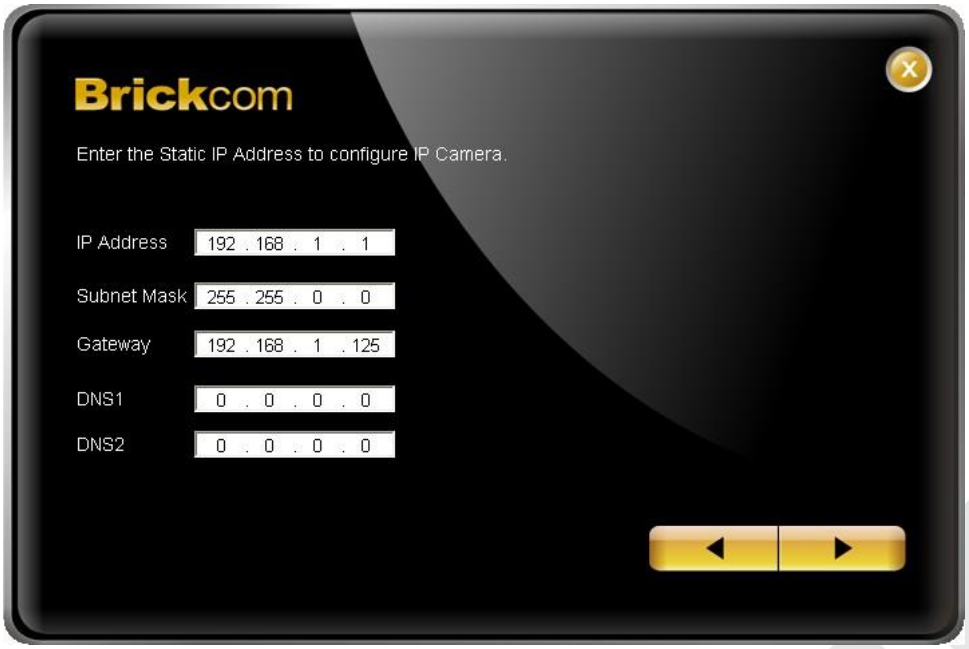


C. There may be many cameras in the local network. Differentiate the cameras using their UPnP name. Double click on the camera from the survey list to connect.

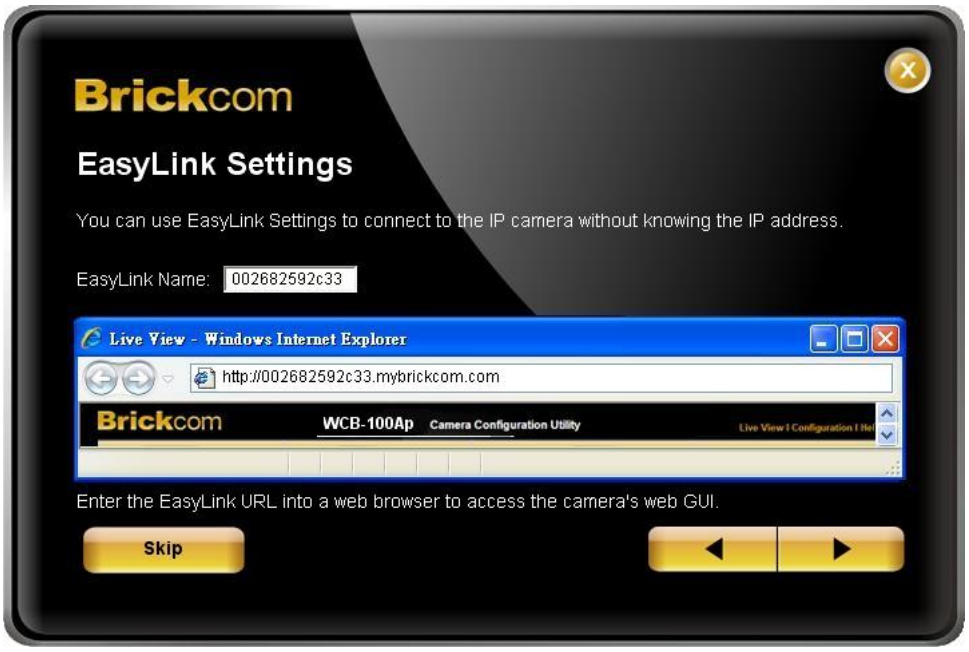


D. For configuring the IP address settings, select either <Settings remain the same>, <Automatically obtain an IP Address (DHCP)> or <Set IP Address configuration manually>. The DHCP setting is recommended.

If <Set IP Address configuration manually> is selected, the following pages will be displayed.



E. **If the camera supports the EasyLinkTM function**, the following page **will** be displayed. Otherwise, this page **will not** be shown. *If desired, click <Skip> to skip this setting.



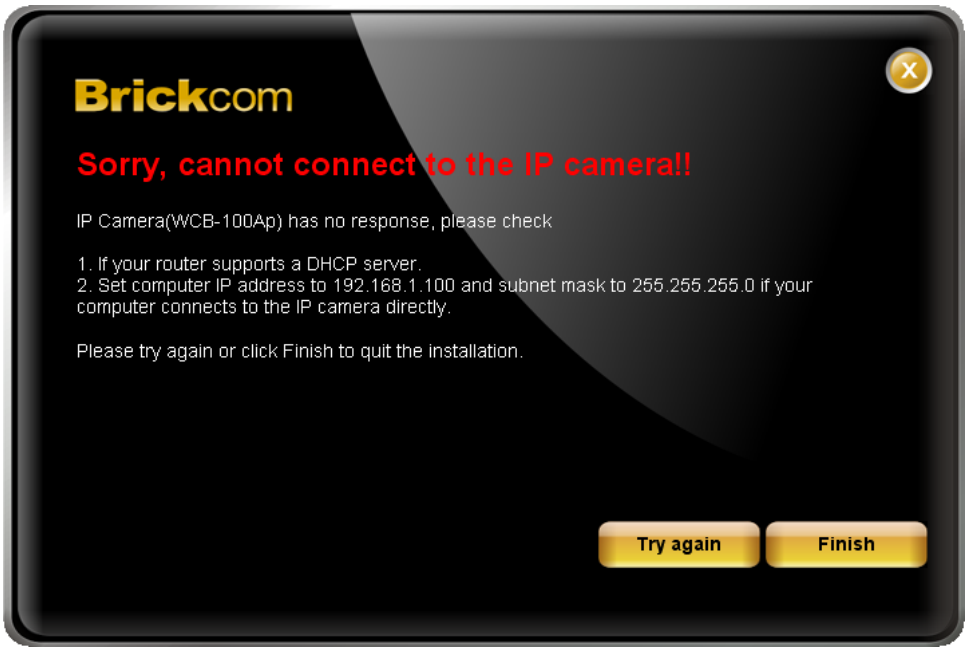
EasyLinkTM is a unique Brickcom function which allows users to assign a unique EasyLink name to their network camera's IP address. There is no need to configure the router to open up ports or remember hard-to-memorize IP addresses. Users can log onto [uniqueEasyLinkname].mybrickcom.com to view the camera's web GUI and live view.

a. Enter a unique EasyLink name whose length must be between 5-32 characters.

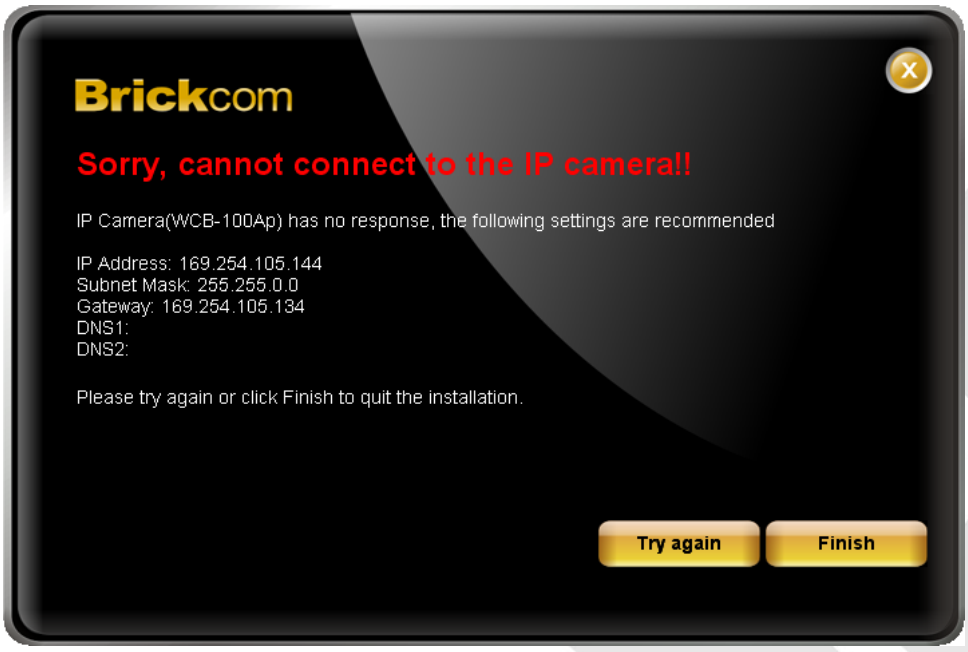
b. When finished, click the arrow button to continue.

F. When the IP address settings have been configured, the screen will either display a successful or failed connection message. If the connection failed, either try again or quit the installation.

a. If “DHCP IP address settings” was selected, the failure page will be displayed as below:



b. If “Static IP address settings” was selected, the failure page will be displayed as below:



c. If the connection was successful, the user will see the message: “Congratulations. The installation of the camera is complete.”

When this window is displayed, click <PC-NVR> to start the PC-NVR program, <Live View> to view the live video from the connected IP camera, or <X> in the top right corner of the screen to close the installation window. If the user starts the PC-NVR program, please refer to the PC-NVR user manual.

Once installation is complete, the Administrator should proceed to the next section "Accessing the Network Camera" for necessary changes and configurations.

Chapter 6 - Accessing the Network Camera

6.1 Check Network Settings

The camera can be connected either before or immediately after the software installation. The Administrator should complete the network settings on the configuration page, including entering the correct subnet mask and IP address of gateway and DNS. Ask the network administrator or Internet service provider for the detail information.

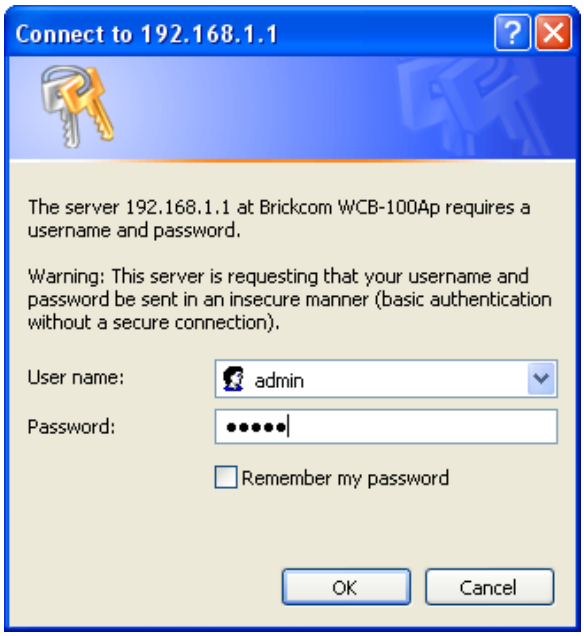
6.2 Add Password to Prevent Unauthorized Access

The Administrator should immediately implement a new password as a matter of prudent security practice. For first time use, the user name and password for the Administrator are assigned as "**admin/admin**". After the Administrator changes the Administrator password, the web browser will display an authentication window to confirm the new password. **Once the password is set, there is no provision to recover the Administrator's password. If the Administrator's password is lost, the only option is to restore the original factory default settings.**

The Administrator can set up a maximum of ten (10) user accounts. Users will be able to access the Network Camera, but will not be allowed to access system configurations.

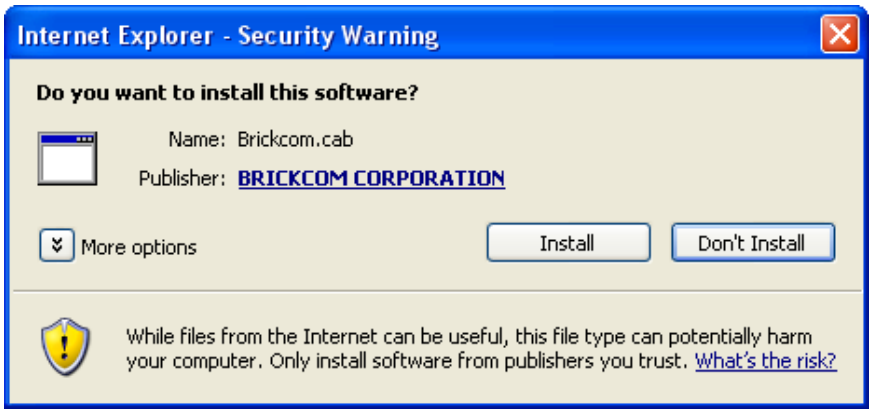
6.3 Authentication

To access the camera's live view, open a web browser and enter the IP address of the camera. A dialog window will pop requesting a username and password. As stated on the previous page, for the default username and password for the Administrator are assigned as "**admin/admin**". For accounts other than the administrator's account, the user can choose to remember the password for future convenience. It is not recommended to check this box when viewing the camera feed from a public computer.



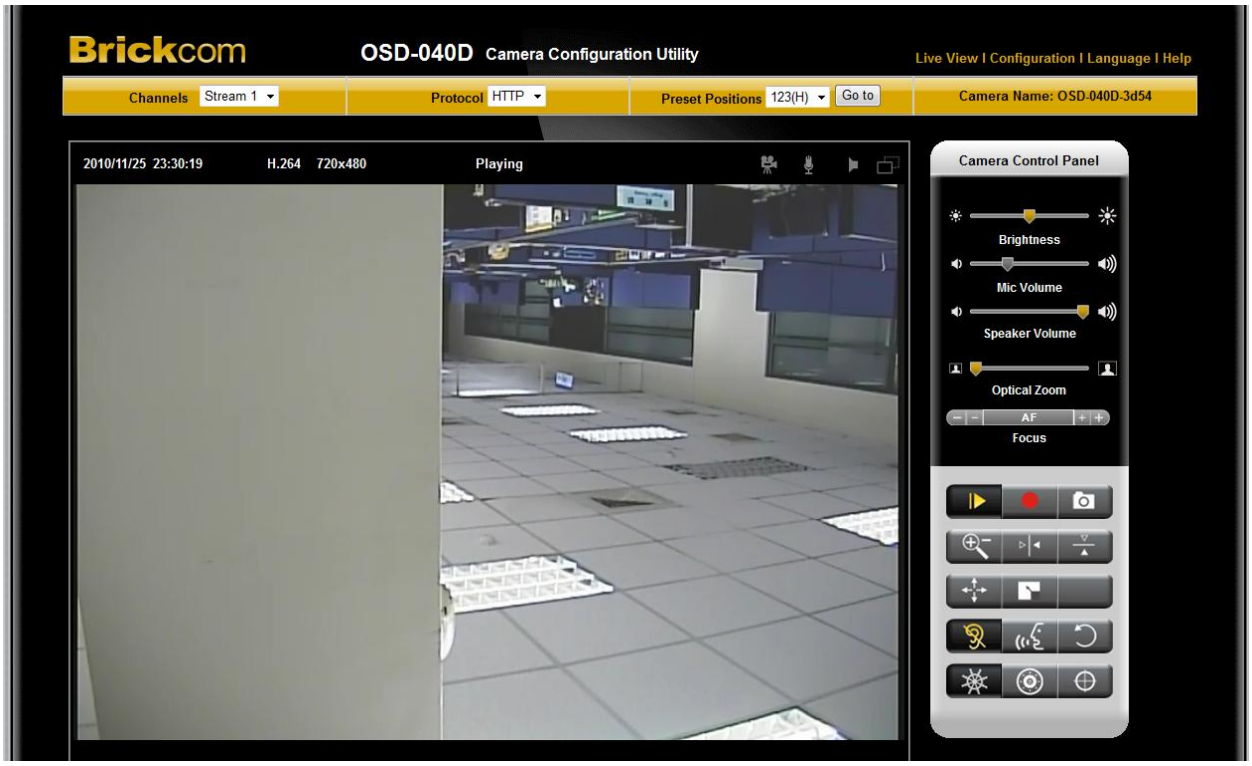
6.4 Installing the Plug-In

For the initial access to the camera in Windows, the web browser may prompt the administrator for permission to install a new plug-in for on Internet Explorer. Permission request depends on the Internet security settings of the user's PC or notebook. If the highest security level is set, the computer may prohibit any installation and execution attempt. This plug-in has been registered for certificate and is used to display the video in the browser. Click "Install" to proceed. If the web browser does not allow the administrator to continue the installation, check the Internet security option and lower the security levels or contact the networking supervisor or IT for help.



NOTE – If an error occurred or the plug-in fails to install, it is because the version of the Electronic Signature is newly released and the VeriSign has not been submitted to Microsoft Windows update for validation. Therefore, plug-in will not have its root certificate. If IE discovers that there is no root certificate after the user's PC connects to the camera, it will automatically redirect to VeriSign Web site to download and install the latest root certificate to make the installation successfully. If the user's computer is able to connect to camera but unable to access the internet, then the installation will fail because the computer will not be able to download the latest root certificate. This problem can be resolved if computer can be connect to the internet and the camera at the same time and will not recur when Windows update patches become available.

Chapter 7 - Live View



Live View is the default page that opens when accessing the camera. Live video is displayed directly in the browser window.

A. Stream1/Stream2 Channels

The network camera offers simultaneous dual stream for optimized quality and bandwidth. Go to Configuration → Camera/Video/Audio → Video to configure the codec compression and video resolution or refer to the Video configuration page.

B. HTTP/TCP/UDP protocol

a. **HTTP** – This unicast method can be used to traverse firewalls. Firewalls are commonly configured to allow the HTTP protocol, thus allowing RTP to be tunneled.

b. **TCP** - This protocol guarantees the complete delivery of streaming data and provides better video quality. The downside of using this protocol is that the quality of its real-time effect is less than that of the UDP protocol.

c. **UDP** - This protocol allows for more real-time audio and video streams. However, network packets may be lost due to network burst traffic and images may be broken. Activate UDP connection time-sensitive responses are more important than video quality.

C. *Go to Preset Position*

To view a preset position at any time, select the position from the Preset Positions drop-down menu and press <Go to>.

NOTE - The Preset Position drop-down menu will appear after the user has set at least one preset position for the camera.

D. *Camera Control Panel*

a. **Brightness** - Drag the slider bar to adjust the image brightness level.

b. **Mic volume** - Drag the slider bar to adjust the microphone volume.

c. **Speaker volume** - The built-in speaker will play sound from an audio clip from the computer microphone when it is enabled.

d. Optical Zoom - Drag the slider bar to adjust the optical zoom. The camera will automatically focus.

e. Focus - Click on AF and MF to switch between Auto Focus and Manual Focus mode. Click on "+ (Near)" and "- (Far)" to manually adjust the focus range.

For more Audio settings, please refer to the Audio configuration page.

Playor Stop - Play or stop the video.

Recording - Record video to a computer.

Snapshot - Capture and save still images.

Digital Zoom - Enable the digital zoom operation

Mirror - Horizontally reflect the display of the live video.

Flip - Vertically reflect the display of the live video.

Real Size - View the object in real size. Press it again to switch back to normal mode.

Full Screen - Switch to full screen mode. Press the “Esc” key to return to normal mode.

Motion Detection Alert - Enable the motion detection alert function.

Mute – Turn off the sound.

Talk – Communicate through the camera using the computer MIC.

Set Default – Reset to default settings.

Patrol - Enable the patrol function. If a designated patrol has not been set for that time period, the first patrol group on the patrol list will be enabled.

Pan/Tilt Control - Click on the arrows to pan and tilt the camera. Click the center of icon to return to the home position.

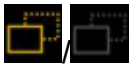
Joystick Mode – Scroll over the live view window to move the camera view in the direction of the mouse pointer.

Center Mode - Click on a point in the live view window to center the camera view on that point.

Recording on/off - Displays the status of recording video

MIC on /off - Displays the status of the MIC volume

Speaker on/off - Displays the status of the Speaker



MD on/off - Displays the status of Motion Detection

NOTE

1. Click on or to switch Joystick Mode and Center Mode.
2. The <Camera Control Panel> functions have no effect on the recorded video. Whatever changes are made to the <Camera Control Panel> **will not** be applied to the recorded video.

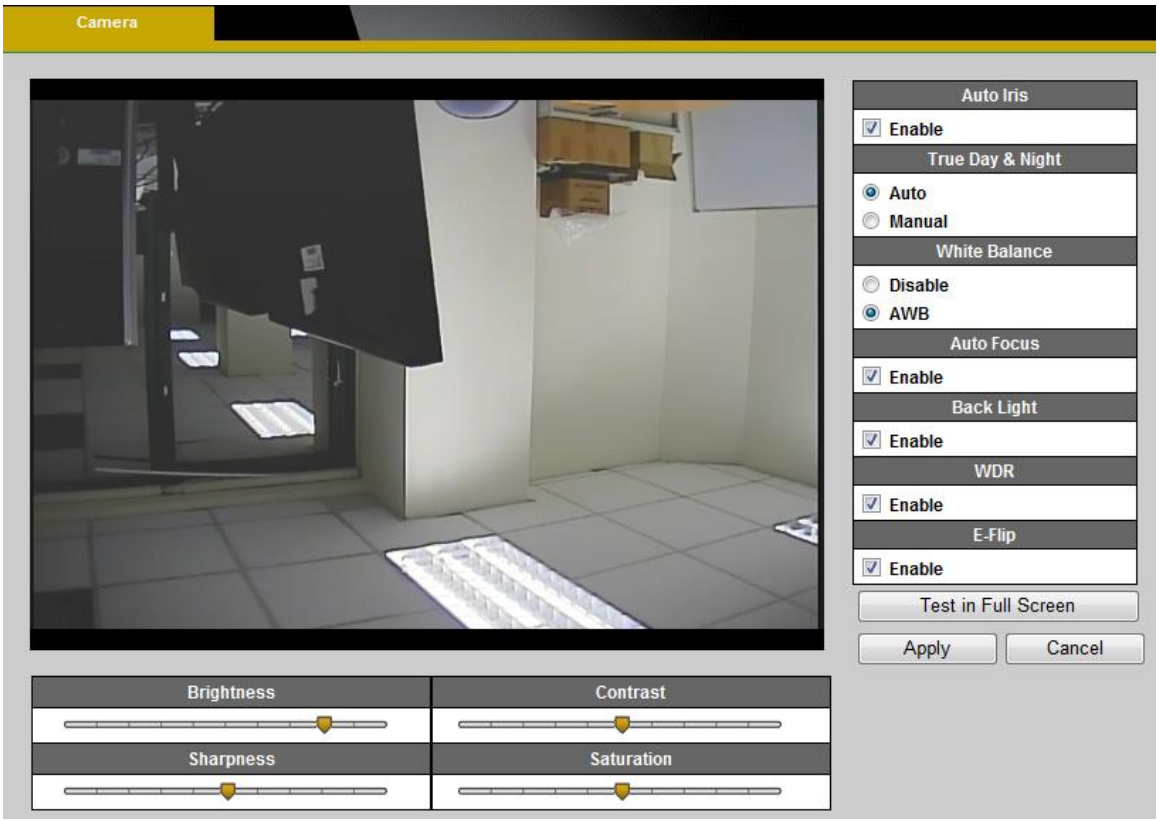
Chapter 8 - Configuration

Click <**Configuration**> on the main page to change the camera settings pages.

NOTE - Only Administrators can access the Configuration page.

8.1 Camera/Video/Audio

8.1.1 Camera



a. **Brightness** - Drag the slider bar to adjust the image brightness level from -5 to +5.

b. **Contrast** - Drag the slider bar to adjust the image contrast level from -5 to +5.

c. **Sharpness** - Drag the slider bar to adjust the image sharpness level from -5 to +5.

d. **Saturation** - Drag the slider bar to adjust the image saturation level from -5 to +5.

A. Auto Iris

Enable to adjust iris automatically.

B. True Day & Night

a. **Auto** - The Network Camera automatically removes the filter by judging the level of ambient light.

b. **Manual** - In day mode, **enable the IR CUT** to keep the IR cut filter active at all times so the infrared light does not reach the sensor and distort the color. In night mode.

C. White Balance

a. **Disable** - Disable the Auto White Balance function.

b. **AWB** - Enable to adjust the White Balance automatically. White Balance is a feature used to compensate for different colors of light being emitted by different light sources. It allows the camera to calibrate the device to correctly display the colors.

D. Auto Focus

When this feature is enabled, the camera will focus automatically.

E. Back Light

Enable to illuminate the display from background. The foreground will appear sharper in contrast with the background.

F. WDR

Enable to create a more evenly exposed video scene in situations where extreme variations of brightness exist in the same area.

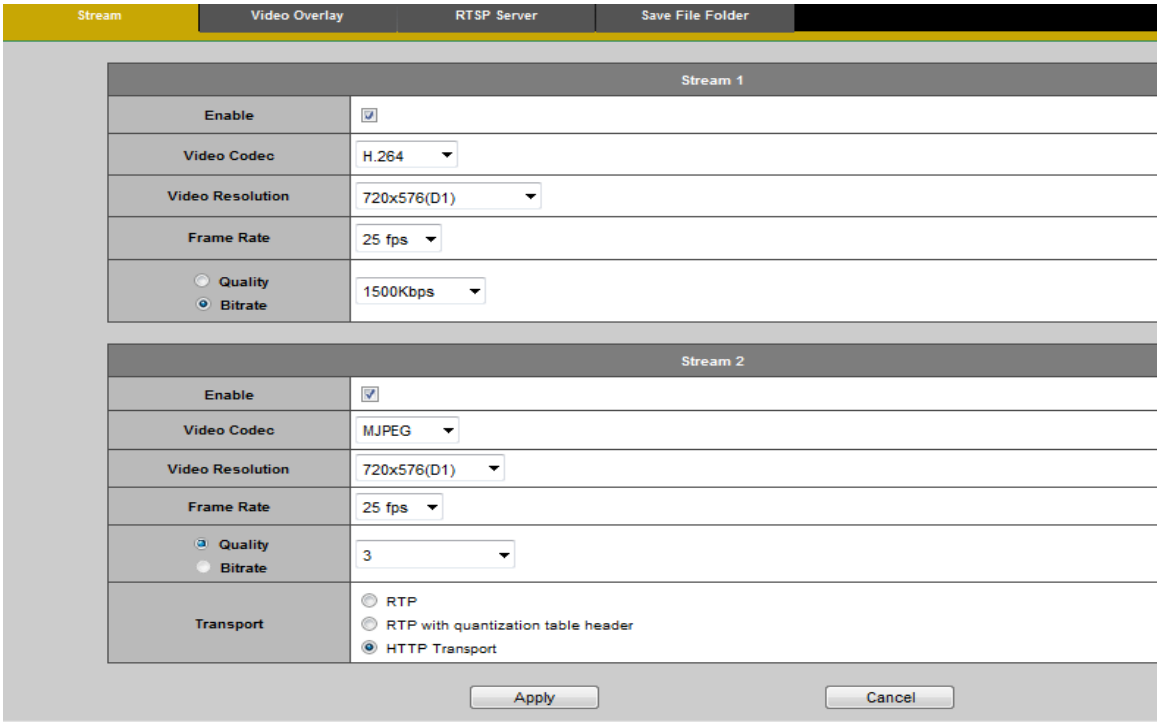
G. E-flip

Enable to flip the image once the camera has passed the 90° tilt point. This function allows a moving target to be tracked when it moves underneath the camera.

Click **Apply** to apply settings or **Cancel** to cancel changes.

8.1.2 Video

The Network Camera offers two separate streams for different viewing options.



A. Stream 1 & Stream 2

a. **Video Codec** - The Network Camera offers three choices of video codec standards for real-time viewing: H.264, MPEG-4 and MJPEG.

b. **Video Resolution** - Select from the drop-down menu to choose the best resolution recording settings.

c. **Frame Rate** - Select the frame rate from drop-down menu. When H.264 or MJPEG is selected, the frame rate ranges from 1 to 30 fps. When MPEG-4 is selected, the frame rate ranges from 1 to 15 fps. Set a higher frame rate for smoother video quality.

d. **Video quality and bit rate** - Choose either “quality” or “bitrate” to control the video quality with video codec at H.264 or MPEG4. Only “quality” can be chosen when video codec at MJPEG is selected. Set the bitrate higher for a better video quality.

NOTE - a higher bitrate will use higher network bandwidth. The video quality can be set between Level 1 to Level 6, with Level 6 producing the best image quality.

e. **HTTP Transport** – If MJPEG is used for Video Codec, users can enable HTTP Transport protocol for video communication.

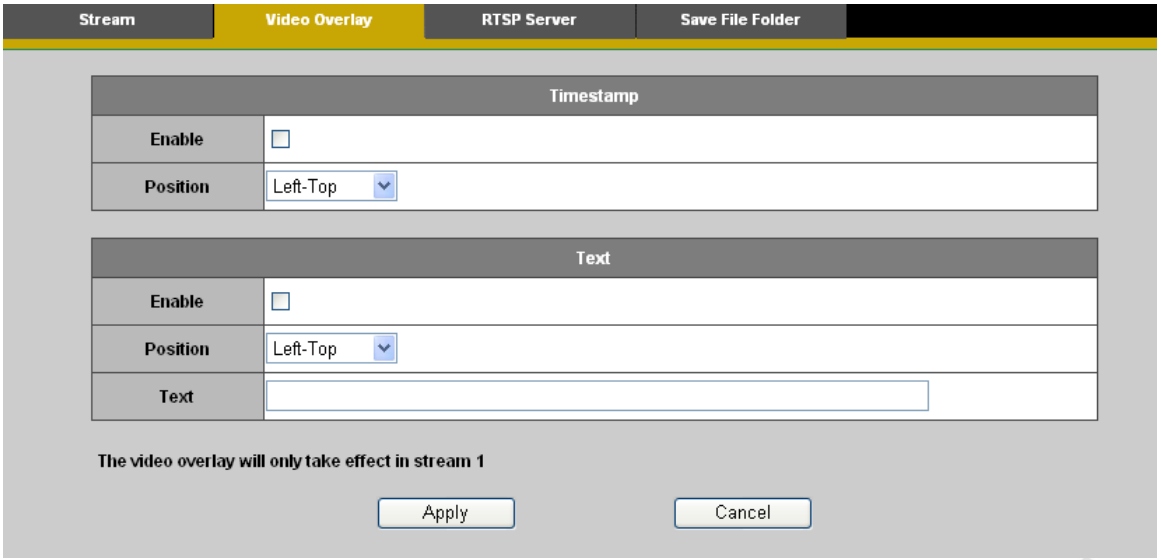
NOTE – HTTP Transport is for non-IE browser used only.

Click **Apply** to apply settings or **Cancel** to cancel changes.

NOTE – For best recording experience, configure the Network Camera to one of the following frame rates based on the Flicker-Free setting:

Flicker-Free	Frame Rate
Outdoor	25, 10, 7, 5, 3, 2
Indoor (50/60 Hz)	25, 20, 10, 7, 5, 3, 2

B. Video Overlay



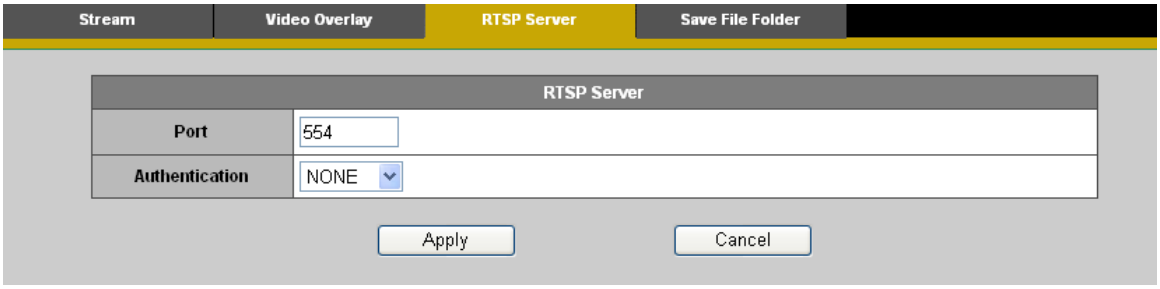
a. **Timestamp** - To display the date and time on the screen during live view, check “Enable” to enable the timestamp function and select the display position from the drop-down menu.

b. **Text** - To make a note about the camera, check “Enable” and select the display position from the drop-down menu. Enter a video description in the text box.

Click **Apply** to apply settings or **Cancel** to cancel changes.

NOTE - The video overlay will only takes effect in stream 1.

C. *RTSP Server*



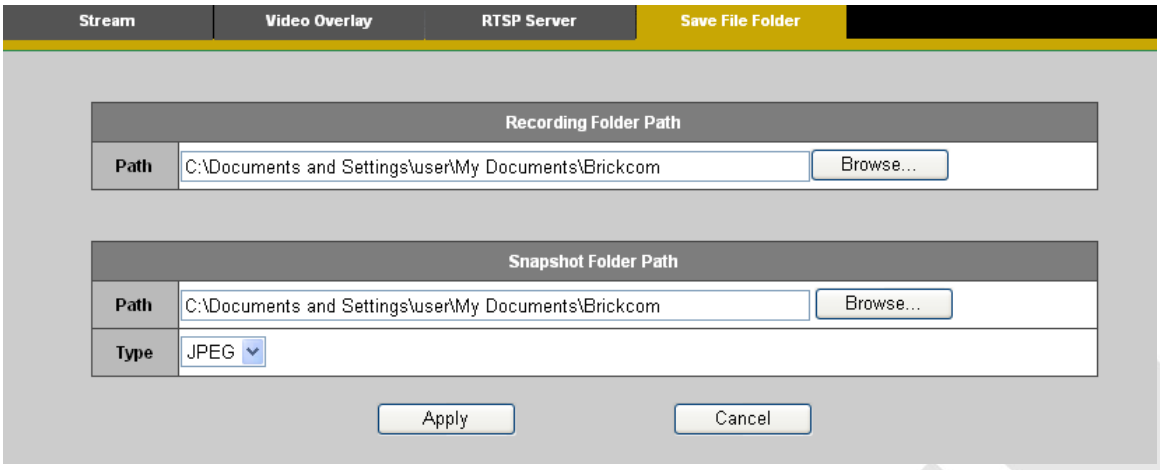
To utilize RTSP authentication, the user must first set a password for the camera. RTSP (Real-Time Streaming Protocol) controls the delivery of streaming media. By default the port number is set to 554.

a. **Authentication** - Depending on the network security requirements, the camera provides two types of security settings for streaming via RTSP protocol: NONE and DIGEST.

   If DIGEST authentication is selected, user credentials are encrypted using MD5 algorithm, thus providing better protection against unauthorized access.

Click **Apply** to apply settings or **Cancel** to cancel changes.

D. *Save File Folder*



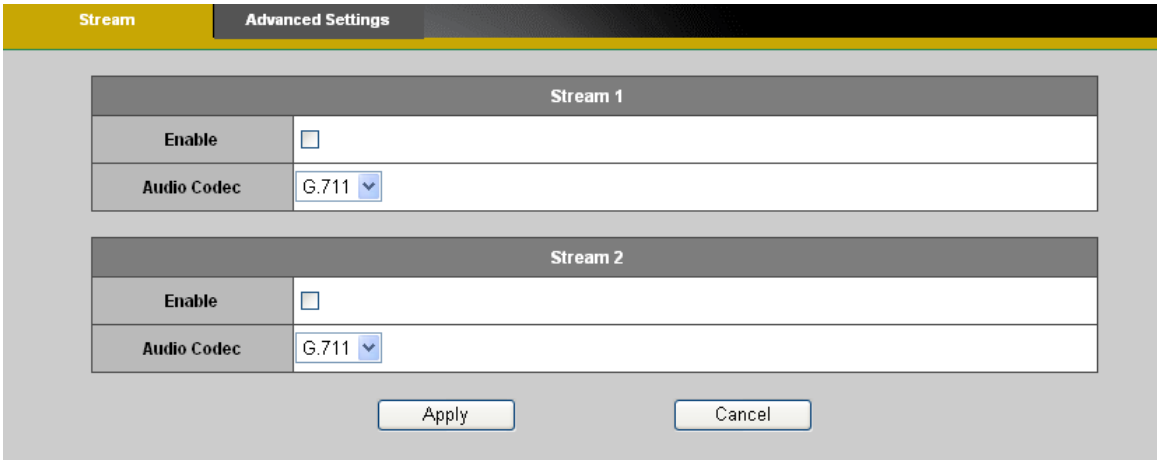
a. **Recording folder path** - The destination for saving the recording video files. Click Browse to specify the saving path.

b. **Snapshot folder path** - The destination for saving the snapshot files. Click Browse to specify the saving path and select the format from the drop-down menu.

Click **Apply** to apply settings or **Cancel** to cancel changes.

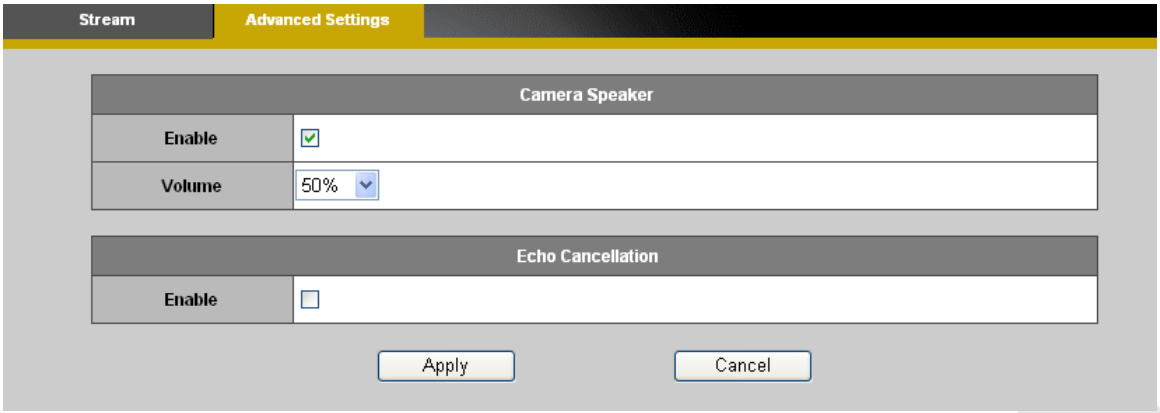
8.1.3 Audio

A. Stream



The administrator can set up two separate streams for the camera for different viewing devices. The administrator can enable or disable the audio function on either stream. If audio enable is selected, select the Audio codec from the drop-down menu.

B. Advanced Settings

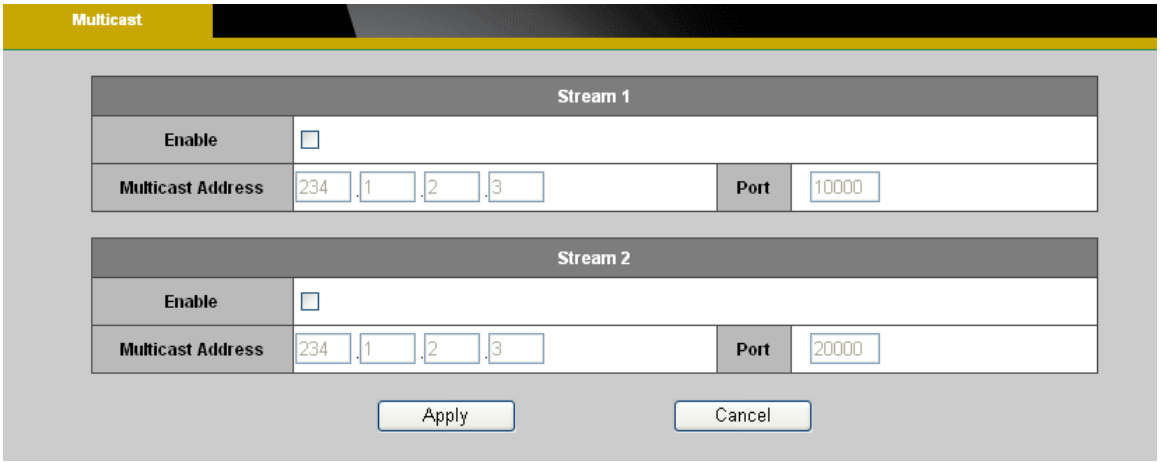


a. **Camera Speaker** – If the speaker is enabled, select the volume from the drop-down menu.

b. **Echo Cancellation Enabled** - Enable to avoid an echo.

Click **Apply** to apply settings or **Cancel** to cancel changes.

8.1.4 Multicast



Multicast sends a video stream to the multicast group address and allows multiple clients to acquire the stream at the same time by requesting a copy from the multicast group address. Therefore, multicast can effectively save Internet bandwidth. The RTSP (Real-Time Streaming Protocol) controls the delivery of streaming media.

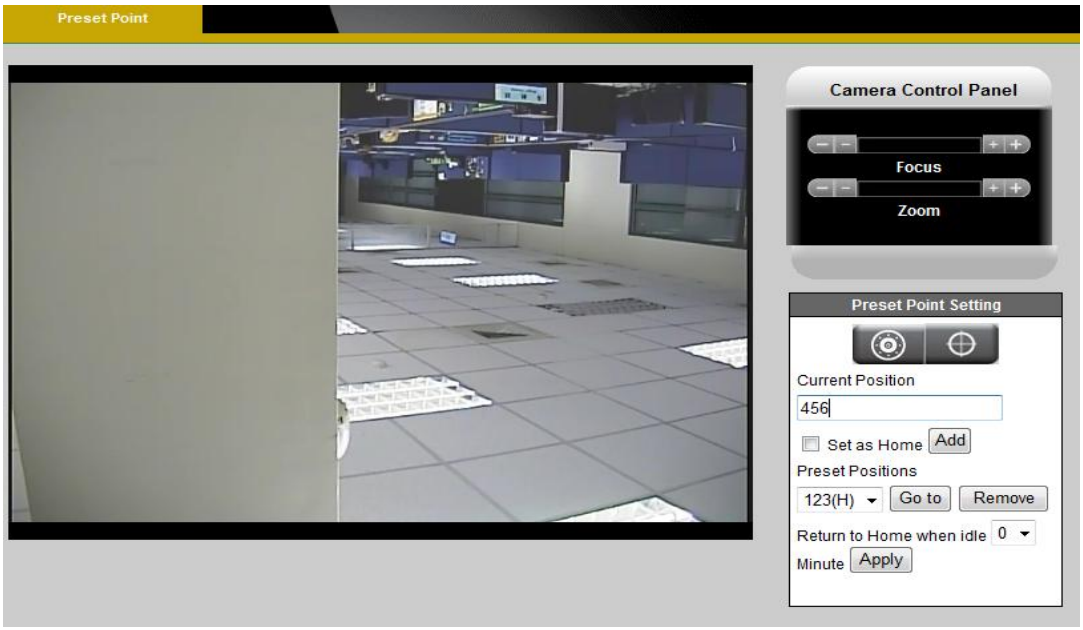
Click “Enable” to enable Multicast stream 1 or Multicast stream 2. The default value for multicast address and port are 234.1.2.3 and 10000. Use different port number for different streams. It is recommended to use the default values.

NOTE - Using the IP address of the Network Camera enables access to the video. Example: rtsp://192.168.1.1/channel1

Click **Apply** to apply settings or **Cancel** to cancel changes.

8.2 Camera Control

8.2.1 Preset Point



A preset position is a pre-defined camera view that can be used to quickly move the camera view to a specific location. To create a preset position:

a. Use the Pan, Tilt and Zoom (PTZ) controls to steer the camera view to the required position.

b. Enter a descriptive name under Current Position and click **Add**.

c. The camera position and focus settings will be saved as a preset position.

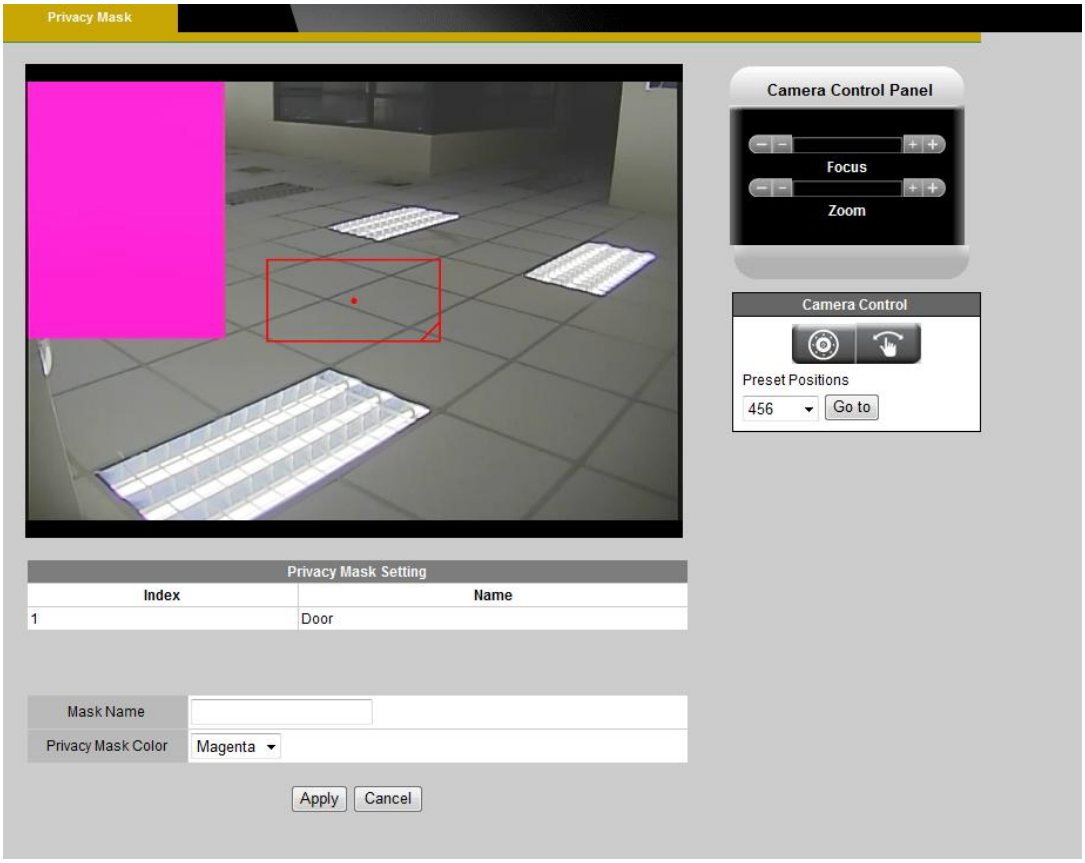
NOTE – A total of sixteen preset points can be set.

a. Preset Positions can be assumed at any time by selecting the preset position's name from the available positions drop-down list. One position can be set as the **Home** position, which is readily accessible by clicking the **Home** button in the PTZ panel.

NOTE - The name of the preset point set as **Home** will have (H) added; for example, Gate (H).

b. The camera can be configured to return to the **Home** position when the camera has been inactive for a specified length of time. Select the desired length of time from the drop-down menu and click **Apply**. Setting the time to zero prevents the camera from automatically returning to the Home position.

8.2.2 Privacy Mask



Add / Edit Privacy mask A privacy mask can be created to conceal areas within the camera's view. The Privacy Mask List displays all the masks that are currently configured for the network camera and if they are enabled.

NOTE – A total of sixteen privacy masks can be created.

To create a new privacy mask:

a. Use the Pan, Tilt and Zoom (PTZ) controls or select Preset Point from the drop-down menu to steer the camera view to the required position.

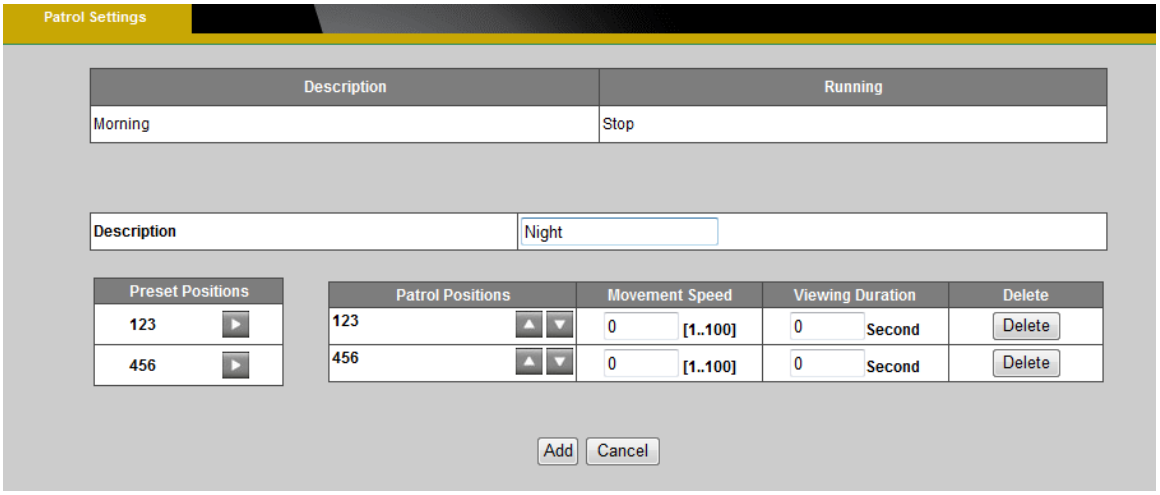
b. Click on **Add**. A rectangle will appear on the center of the viewing window.

c. Use the mouse to resize the privacy mask window.

d. Enter a descriptive name in **Mask name**, choose a color from the **Privacy mask color** drop-down menu and click **Apply**.

To edit a privacy mask, select the mask and reshape, move or change the color as needed.

8.2.3 Patrol Settings



The camera can be set to patrol a group of preset points. For each patrol group, the user can configure the preset point order, movement speed, and viewing duration.

To create a patrol group:

a. Click on **Add** and enter a descriptive name in **Description**.

b. Add preset points to the patrol group by clicking the next to the desired preset point.

c. Use the arrow buttons to change the order of the preset positions by using the Adjust the sequence of positions, and enter **Movement Speed** and **Viewing Duration** for each preset point.

d. Click on **Apply** to save the patrol group.

e. Enable a patrol set by clicking on **Start/Stop**.

NOTE

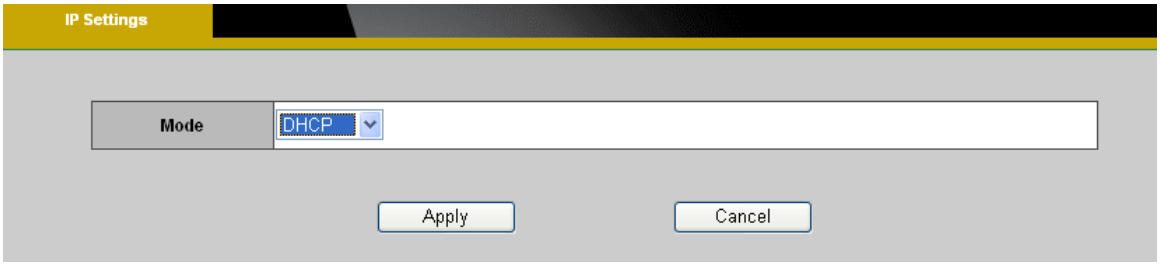
1. A total of sixteen preset points can be assigned to a patrol group.
2. A total of four patrol groups can be assigned to a network camera.

8.3 Network

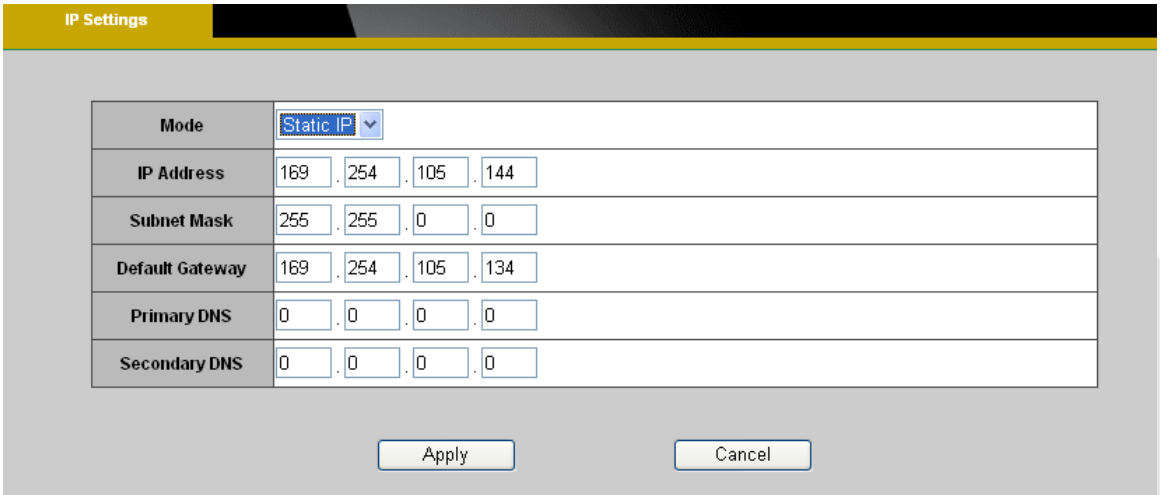
8.3.1 IP Settings

This section explains how to configure a wired network connection for the camera. There are several ways to setup the camera over the Internet: (1) obtain an available dynamic IP address assigned by a DHCP server, (2) use a static IP, or use PPPoE (Point-to-point over Ethernet). Select the desire setup mode from the IP settings drop-down menu.

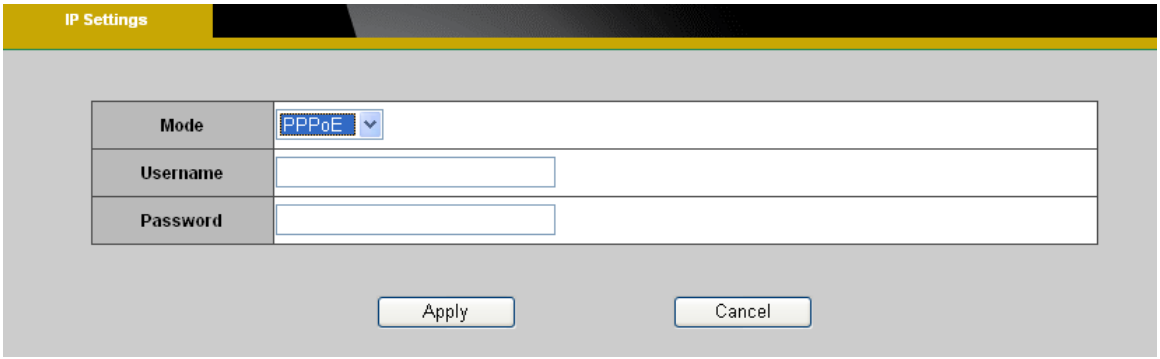
a. **DHCP** –If this option is selected, the camera will automatically obtain an available dynamic IP address from the DHCP server each time it connects to the LAN.



b. **Static IP** - Select this option to manually assign a static IP address to the camera. Enter the static IP address, Subnet mask, Default Gateway, Primary and Secondary DNS provided by the ISP.



c. **PPPoE (Point-to-point over Ethernet)** - Use this mode if connecting to the Internet through a DSL Line.

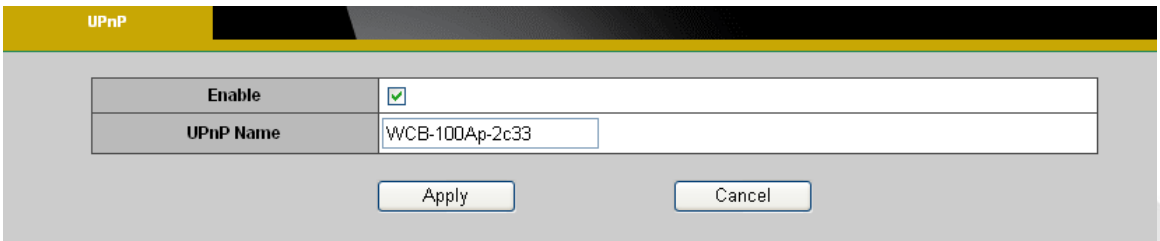


NOTE - To utilize this feature, it requires an account provided by an Internet Service Provider. Enter the user name and password provided by the ISP.

Click **Apply** to apply settings or **Cancel** to cancel changes.

8.3.2 UPnP

Universal Plug and Play (UPnP) simplifies the process of adding a camera to a local area network. Once connected to a LAN, the camera will automatically appear on the intranet. Click “Enable” to enable this function and enter an UPnP name which the camera will appear under on the intranet.



Click **Apply** to apply settings or **Cancel** to cancel changes.

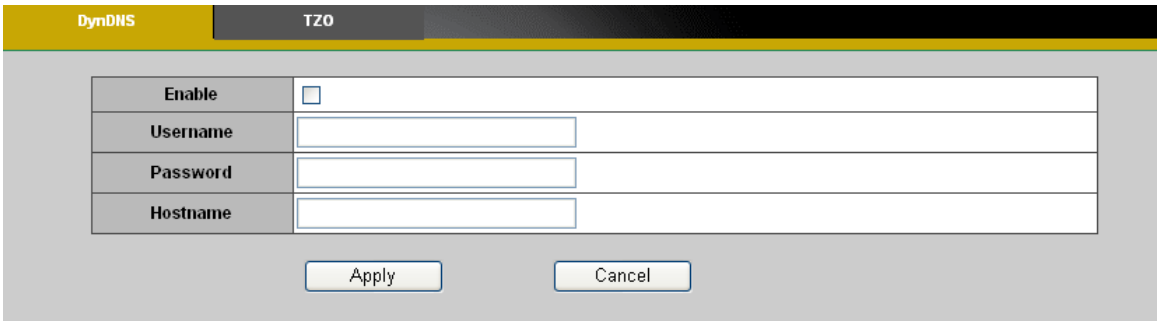
8.3.3 DDNS (dynamic domain name service)

DDNS links a domain name to an IP address, allowing users to easily access their camera even with a changing IP address. Brickcom network cameras are compatible with two DDNS service providers (1) DynDNS, and (2) TZO.

NOTE - Before utilizing this function; please apply for a dynamic domain account from a DDNS provider.

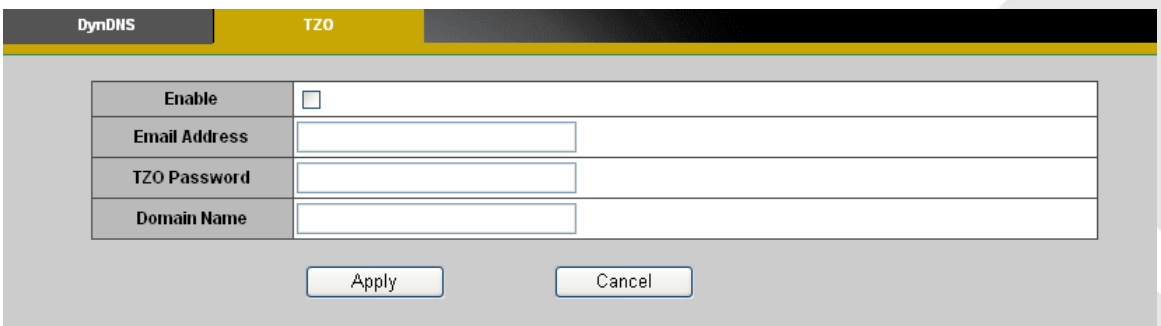
a. **DynDNS** – Enable the DynDNS to allow the camera to have a fixed host and domain name. Refer to the DynDNS website (www.dyndns.com) to apply for a dynamic domain account. When an account has been created, enter the username, password and hostname.

   Click **Apply** to apply settings or **Cancel** to cancel changes.



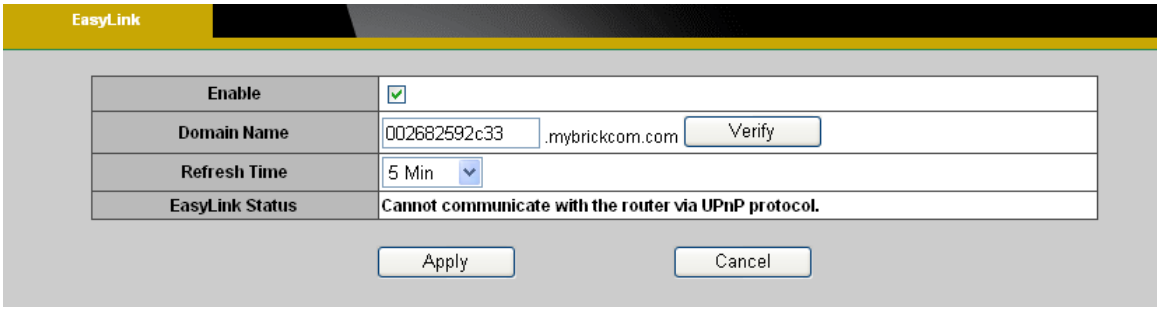
b. **TZO** - TZO is a DDNS provider which allows users to create a dynamic DNS. Refer to the TZO website (http://www.tzo.com/) to apply for a dynamic domain account. When an account has been created, enter the e-mail address, password and domain name.

   Click **Apply** to apply settings or **Cancel** to cancel changes.



8.3.4 EasyLink™

EasyLinkTM is a unique Brickcom function which allows users to assign a unique domain name to their network camera's IP address. There is no need to configure the router to open up ports or remember hard-to-memorize IP addresses. When this function is enabled, users can log onto [uniquedomainname].mybrickcom.com to view the camera's web GUI and live view.



a. Check the box to enable EasyLink™.

b. Enter a unique domain name whose length must be between 5-32 characters. Verify that the domain name is available.

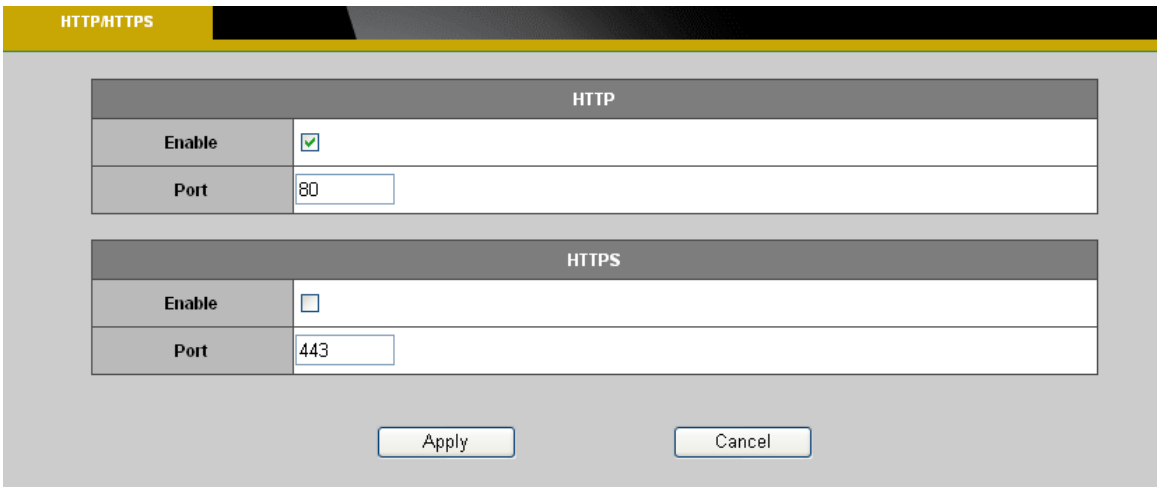
c. Select a desired amount of time from the Refresh Time drop-down menu to confirm the connection status.

Click **Apply** to apply settings or **Cancel** to cancel changes.

NOTE - The EasyLink function will not work if the following conditions occur:

1. The camera cannot be located behind a double NAT network.
2. The camera's IP address cannot be assigned to specific port numbers using the router's port forwarding.
3. EasyLink uses UPnP to exchange port information with the router. The camera must connect to the internet through a router which supports UPnP.

8.3.5 HTTP/HTTPS



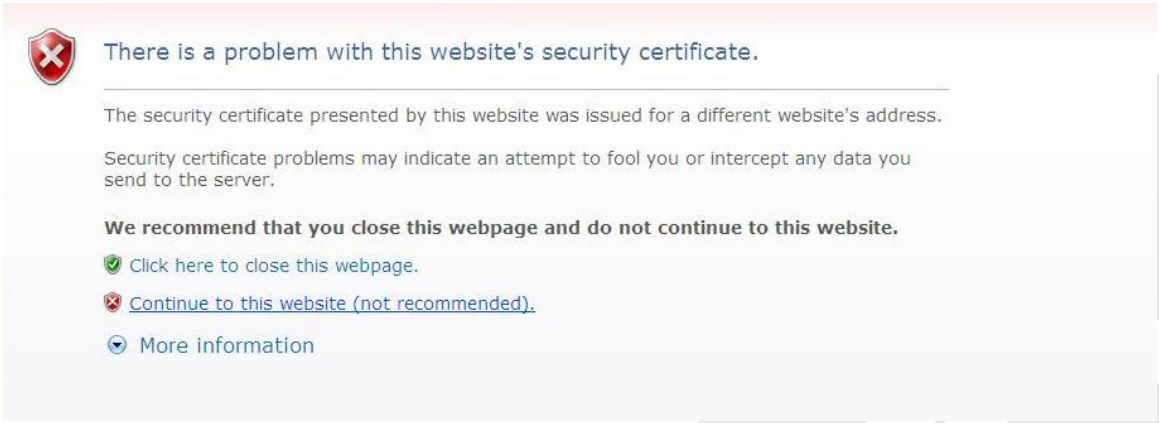
a. **HTTP** – (HyperText Transfer Protocol) - This protocol allows for TCP protocol quality without having to open specific ports for streaming. Users inside a firewall can utilize this protocol to allow streaming data through.

b. **HTTPS** - (Hypertext Transfer Protocol over SSL) - This protocol allows authentication and encrypted communication over SSL (Secure Socket Layer). It helps protect streaming data transmission over the Internet on a higher security level than HTTP.

Click “Enable” to enable and **Apply** to apply settings or **Cancel** to cancel changes.

To enable HTTPS, users have to create and install a certificate.

i. Click “Continue to this website” to install.



ii. Enter the User name and Password of the camera.

iii. Click “Certificate Error” on the top right corner of the window to view the certificate.

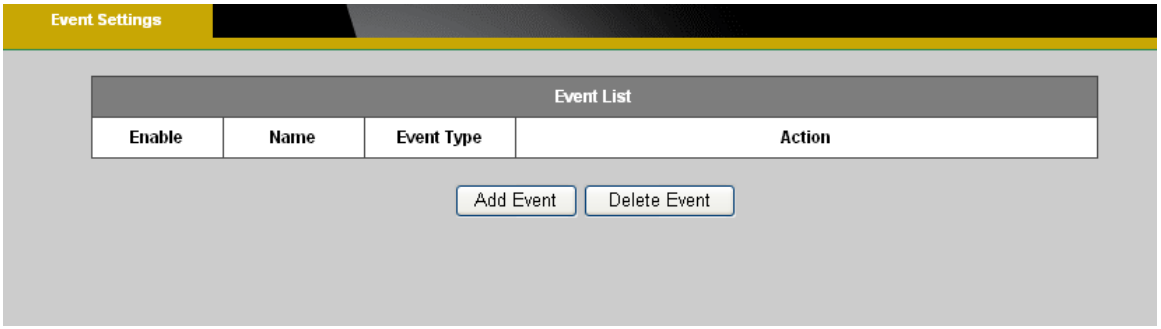
iv. Click “Install Certificate” and follow the steps to finish the installation.

8.4 Event

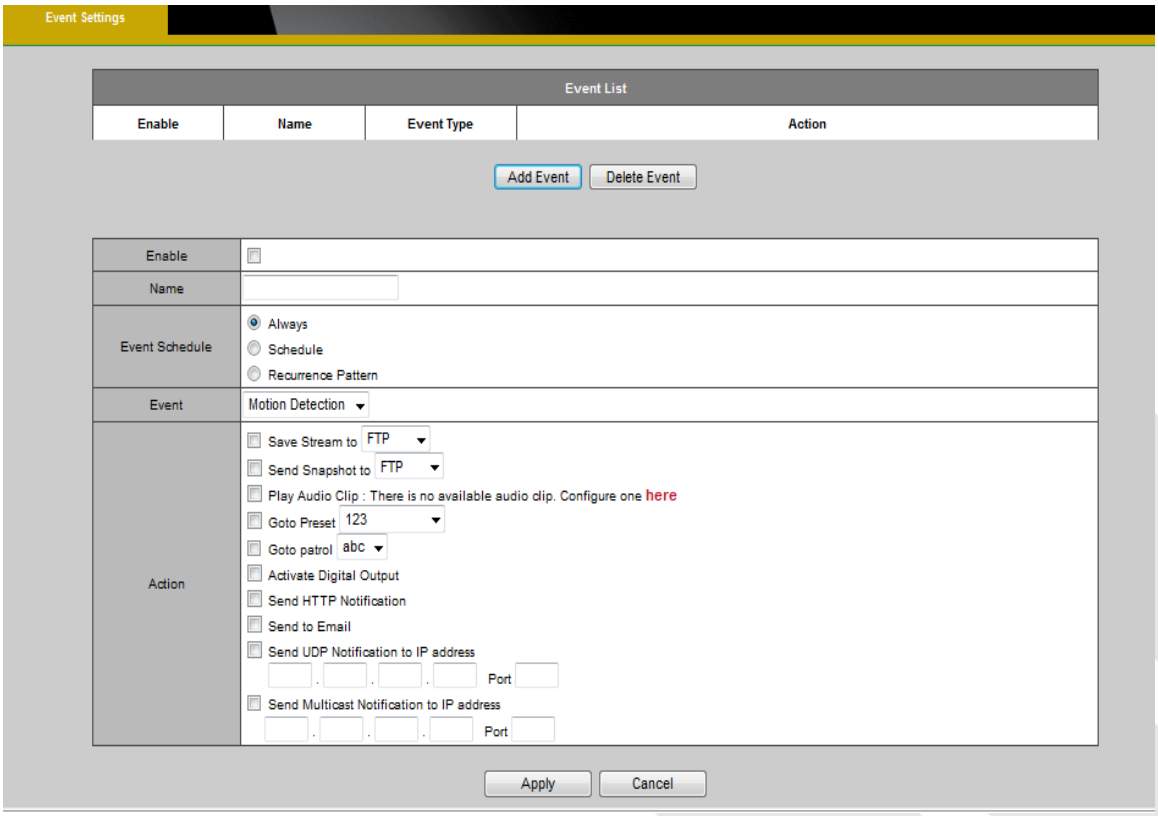
8.4.1 Event Settings

When an event (such as unauthorized movement) occurs, the camera can be scheduled to perform certain actions. An Event Type is a set of parameters that defines these actions.

This section describes how to configure the camera to perform certain actions when events occur.



Click <Add Event> on the Event Settings page. The Event Setup page will appear.



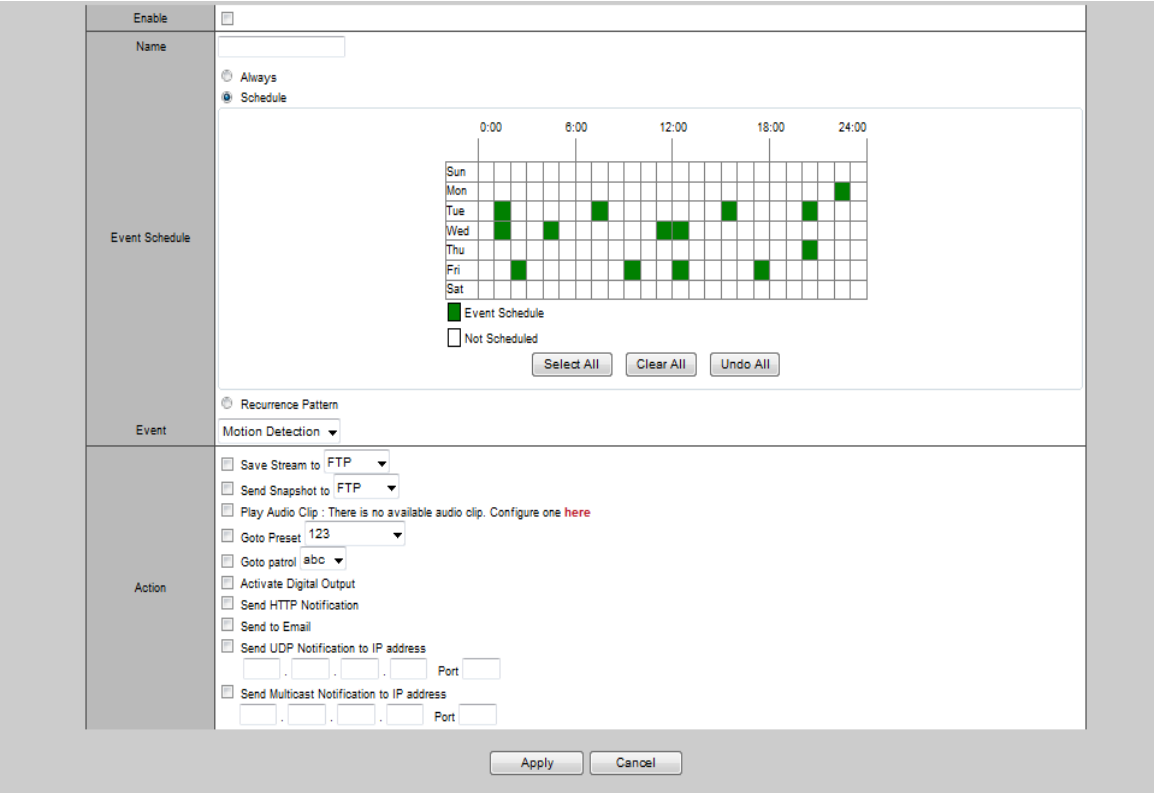
How to Set Up an Event Schedule

Event Schedule describes how and when the camera performs certain actions.

a. Check “Enable” and enter a descriptive name for the event schedule.

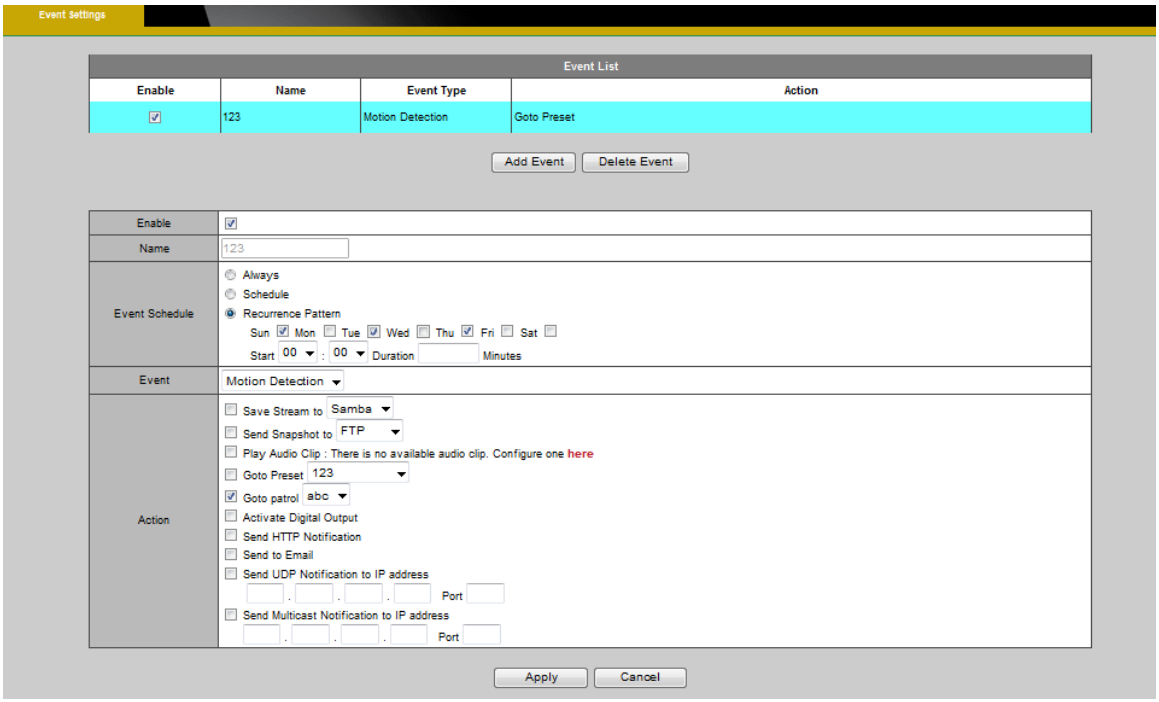
b. Set Event Schedule to define when the event is activated by selecting from Always (24 hours), Schedule or Recurrence pattern.

   i. If Schedule is selected from the Event Schedule, the following page will be displayed:



A Scheduled Event can be programmed for certain times and day. Click individual boxes to schedule specific times for the camera to detect events.

ii. If Recurrence Pattern is selected, the following page will be displayed.

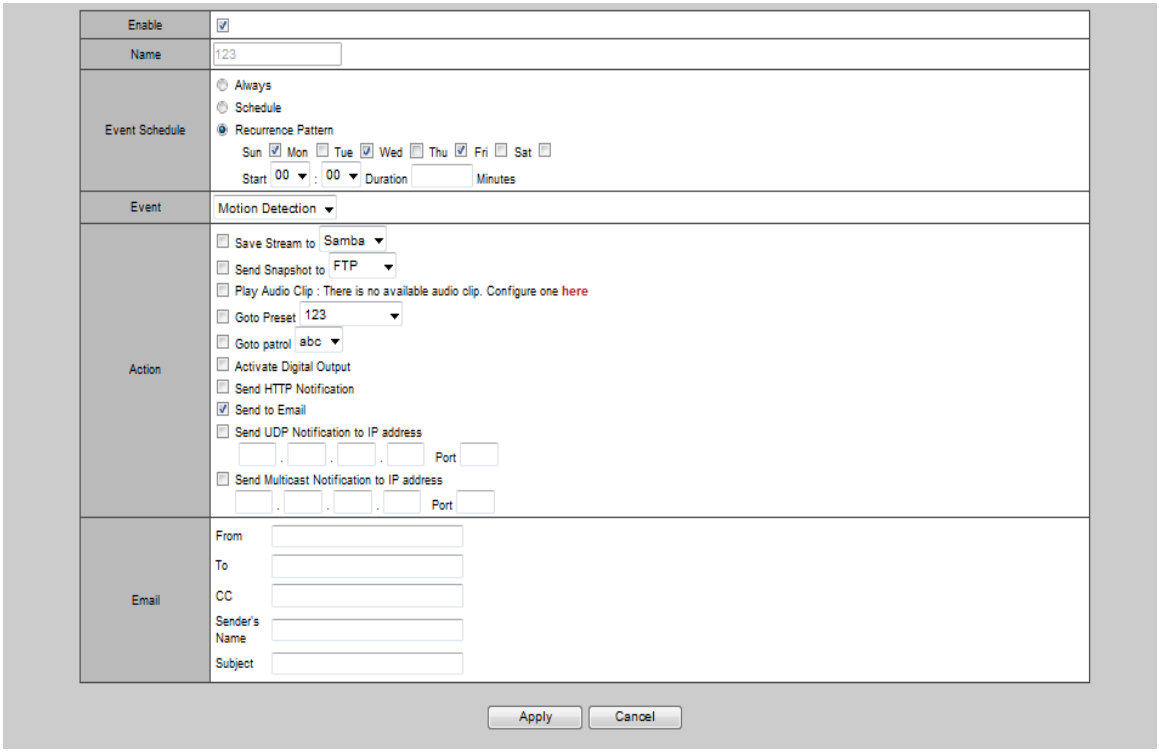


An event schedule can be programmed to recur at different times according to the user's needs. Select the days for the event schedule to occur. Select a start time and specify the duration.

c. Define what will trigger an event to occur by selecting an option from the Event drop-down list.

d. Select the Actions that will occur when the event is triggered.

i. When <Send to Email> is selected, the following page will be shown:



1) From - Enter the email address of the sender.

2) To - Enter the email address of the recipient. To enter multiple recipients, separate each using a comma.

3) My Name - Enter the sender's name that will appear in the recipient's inbox.

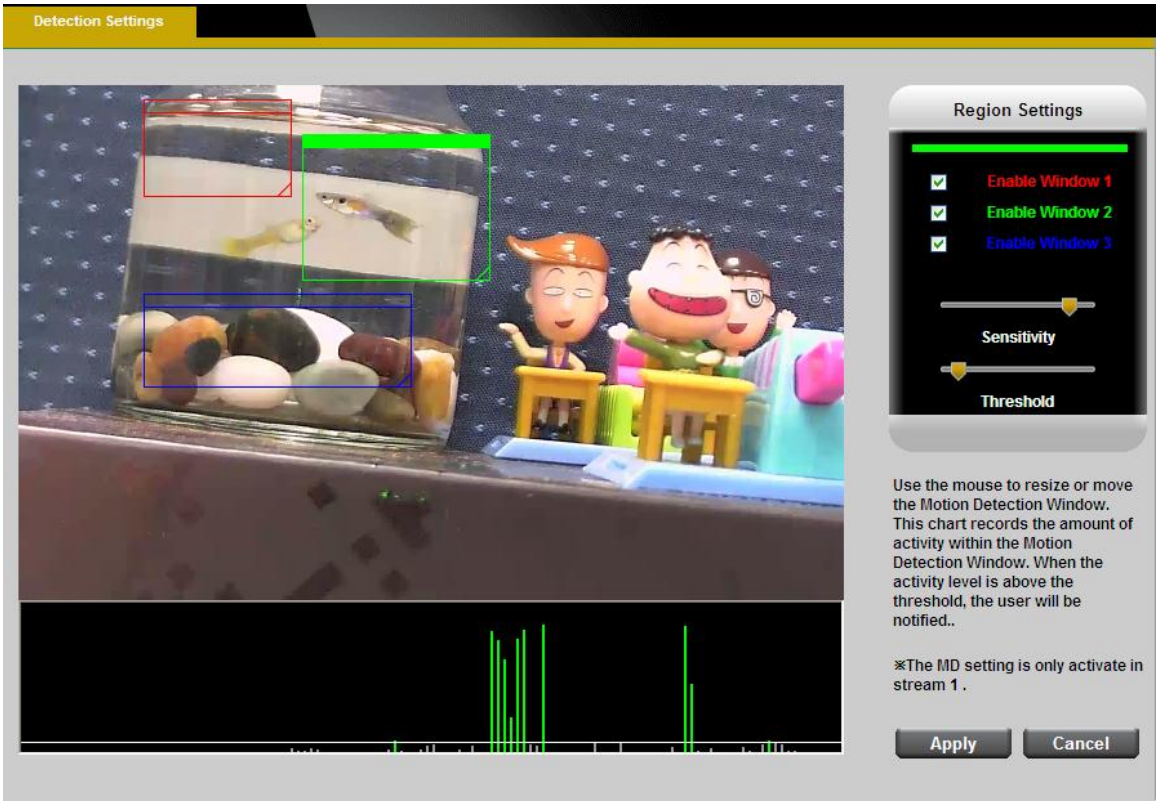
4) Subject - Enter the title of the email.

e. When complete, click Apply to save new event or Cancel to delete the event. The new event will appear on the event list.

f. To edit an event setting; select the event from the list. To remove an event setting from the list, select an event name from the list and then click <Delete Event>. Click <Add Event> to add more events.

8.4.2 Motion Detection

Motion can be detected by measuring changes in the speed or vector of an object or objects in the monitored area. This section explains how to configure the Network Camera to enable motion detection.



a. **Detection Setting** – Use this setting to enable and define the motion detection windows. The user can defined up to three areas on the live view window for motion detection.

   i. Select <Window1>, <Window2>, or <Window3> to adjust the motion detection window.

   ii. Check the box to enable the window.

   iii. Use the mouse to resize or move the motion detection window.

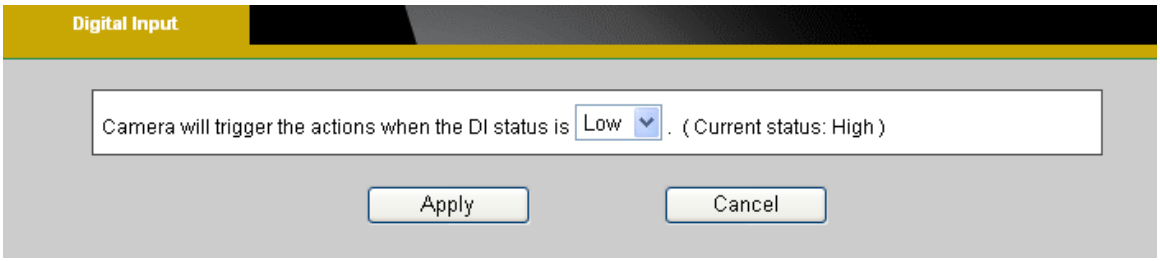
   iv. Adjust the “Sensitivity” level. Lower sensitivity levels will result in more activity needed to trigger an event.

   v. Adjust the “Threshold” to change the threshold level. The higher the threshold, the larger objects need to be to trigger an event.

vi. The chart below the Live View window indicates the activity level of the Motion Detection window. When motion is detected by the camera and exceeds the defined threshold, a red bar will appear. Users can use this feature as a trigger source to send photos or videos to a remote server via email or FTP.

Click **Apply** to apply settings or **Cancel** to cancel changes.

8.4.3 Digital Input (DI)



The DI socket allows the IP camera to receive input from an external device. The external device should have the ability to drive voltage on the connected DI wire to the triggering voltage level in order to notify the IP camera of any event of interest. The IP camera will then process the event notification according to the specific event rules.

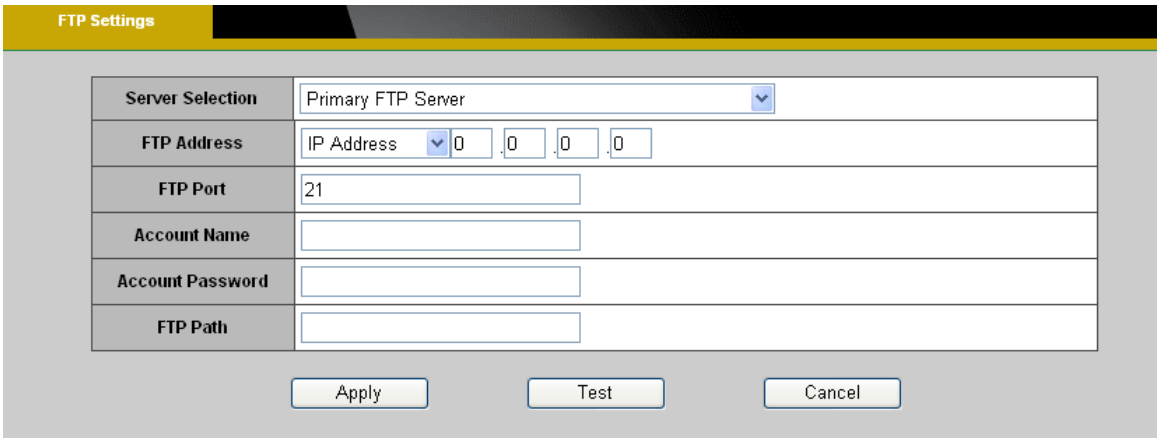
a. **Triggering voltage Level**: LOW or HIGH. Users should select the option according to the capability of their external device.

NOTE – This function is only available for CB-101A and CB-102A models.

8.5 Notifications

Use the tools in this section to specify what type of notification will be sent when an event occurs. The camera can send buffered images to an FTP server, Samba, Email, or HTTP.

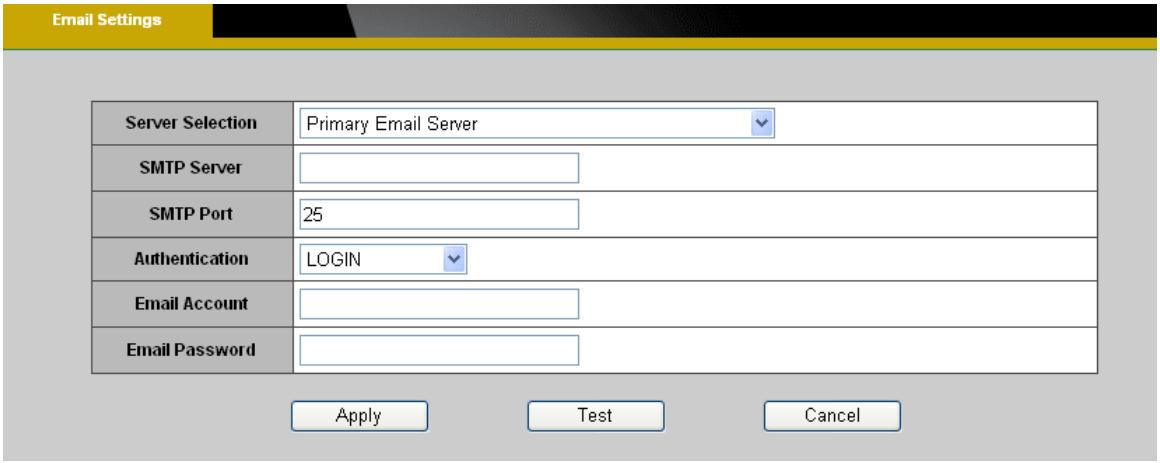
8.5.1 FTP Settings



File Transfer Protocol (FTP) is used as an application component to automatically transfer files for program internal functions. Select “Primary FTP Server” from the Server Selection drop down menu to send media files to a FTP server when an event is triggered. Enter the FTP IP address or hostname. By default, the FTP port server is set to 21. Enter the account name, password and FTP Path to configure the settings.

Click **Apply** to apply settings or **Cancel** to cancel changes.

8.5.2 E-mail Settings



Select “Primary Email Server” option from the Server Selection drop down menu to send media files to an email server when an event is triggered.

a. **SMTP Server** - Enter the server host name of the email server.

b. **SMTP Port** - Enter the port number of the email server; by default, the SMTP port is set to 25.

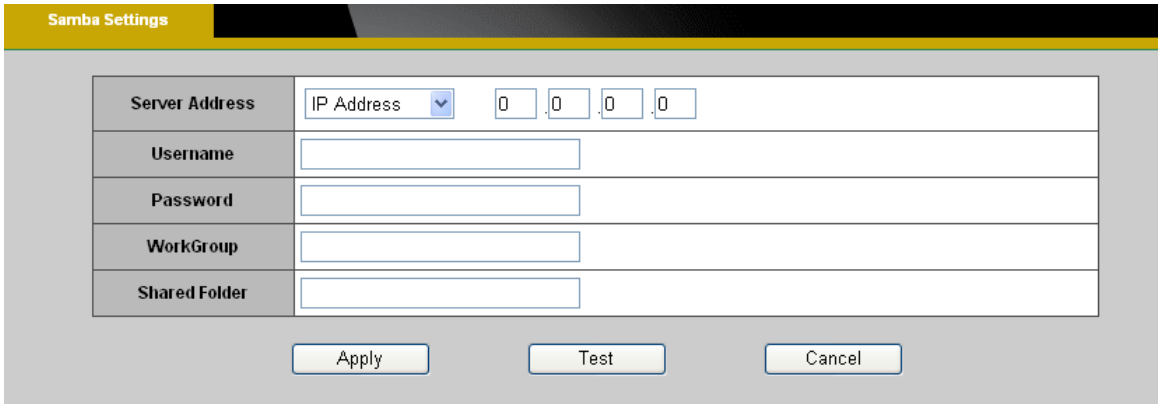
c. **Authentication** - Select the authentication type from the drop-down menu.

d. **Email Account** - Enter the user name of the email account if necessary.

e. **Email Password** - Enter the password of the email account if necessary.

Click **Apply** to apply settings or **Cancel** to cancel changes.

8.5.3 Samba Settings



Select this option to send the media files via a network neighborhood when an event is triggered.

a. **Server Address** - Enter the IP address of the Samba server.

b. **User Name** - Enter the user name of the Samba server.

c. **Password** - Enter the password of the Samba server.

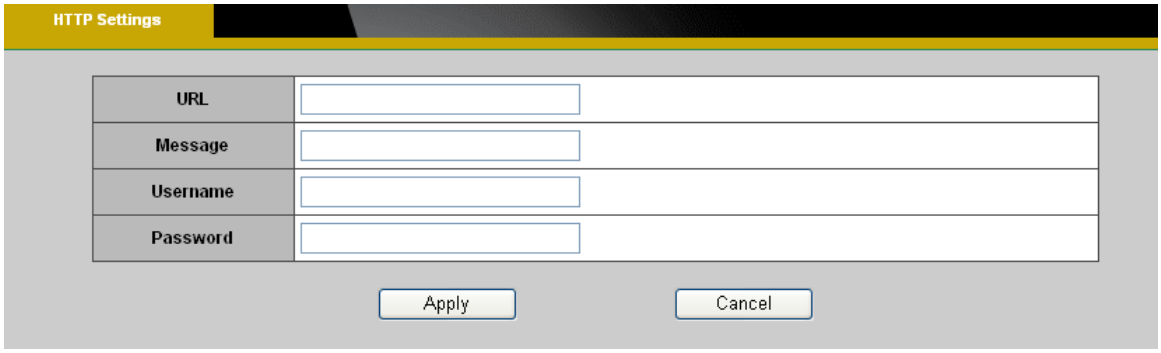
d. **Workgroup** - Enter the workgroup of the Samba server.

e. **Shared Folder** - Enter the share folder of the Samba server.

Click **Apply** to apply settings or **Cancel** to cancel changes.

8.5.4 HTTP Settings

Select this option to send the media files via an HTTP notification when an event is triggered.



a. **URL** – Specify the URL to send HTTP requests. The URL is normally written as: http://ip_address/notification.cgi?parameter
ip_address – type the IP address or host name of the HTTP host.
Parameter – type the notification parameter if necessary.

Example
URL - http://192.168.1.1/xxxx.cgi
Message - name1=value1&name2=vlaue2

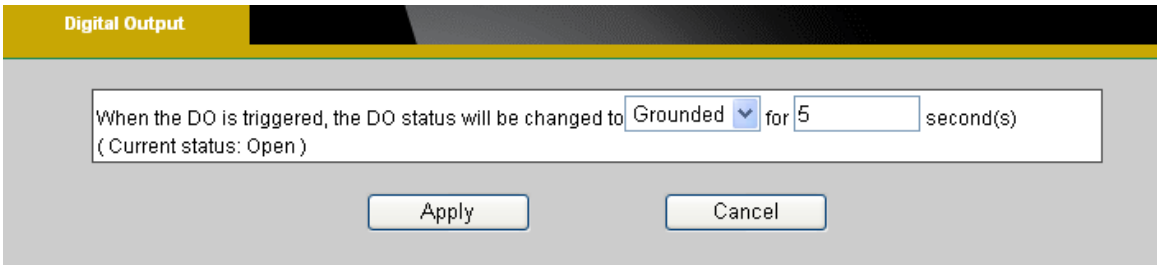
Result - http://192.168.1.1/xxxx.cgi? name1=value1&name2=vlaue2
(ex: https://192.168.1.1/notification.cgi?event=MD&camera=FB-100A)

b. **Message** - Enter the message notification that will be sent when an event is triggered.

c. Enter the user name and password if necessary.

Click **Apply** to apply settings or **Cancel** to cancel changes.

8.5.5 Digital Output (DO)

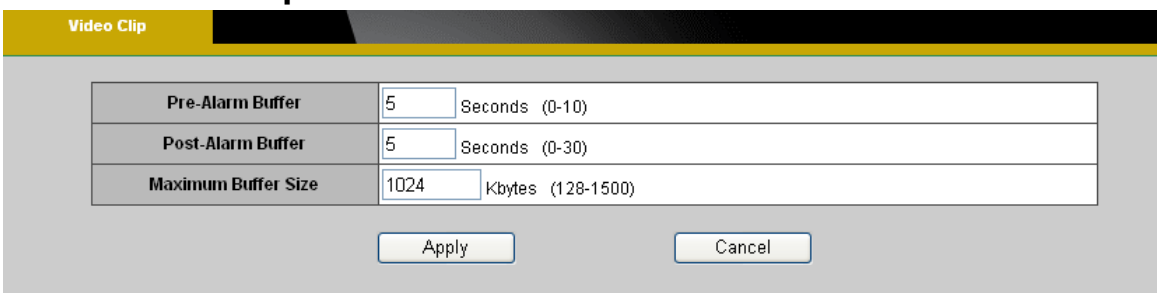


The DO socket allows the IP camera to send output to an external device. While executing the DO notification action, the IP camera drives voltage on the connected DO wire to the triggering voltage level for X number of seconds. The connected external device will then be triggered for X number of seconds.

a. **Triggered Voltage Level**: OPEN or GROUND. Users should select the option according to the specification of their external device.

NOTE – This function is only available for CB-101A and CB-102A models.

8.5.6 Video Clip



This function is used to determine when video clips will be recorded and stored after an event is triggered.

a. **Pre-alarm buffer** - Images can be stored internally on the server from the time immediately preceding the trigger. Enter the desired length of time.

b. **Post-alarm buffer** - Images can be stored internally on the server from the time immediately following the trigger. Enter the desired length of time.

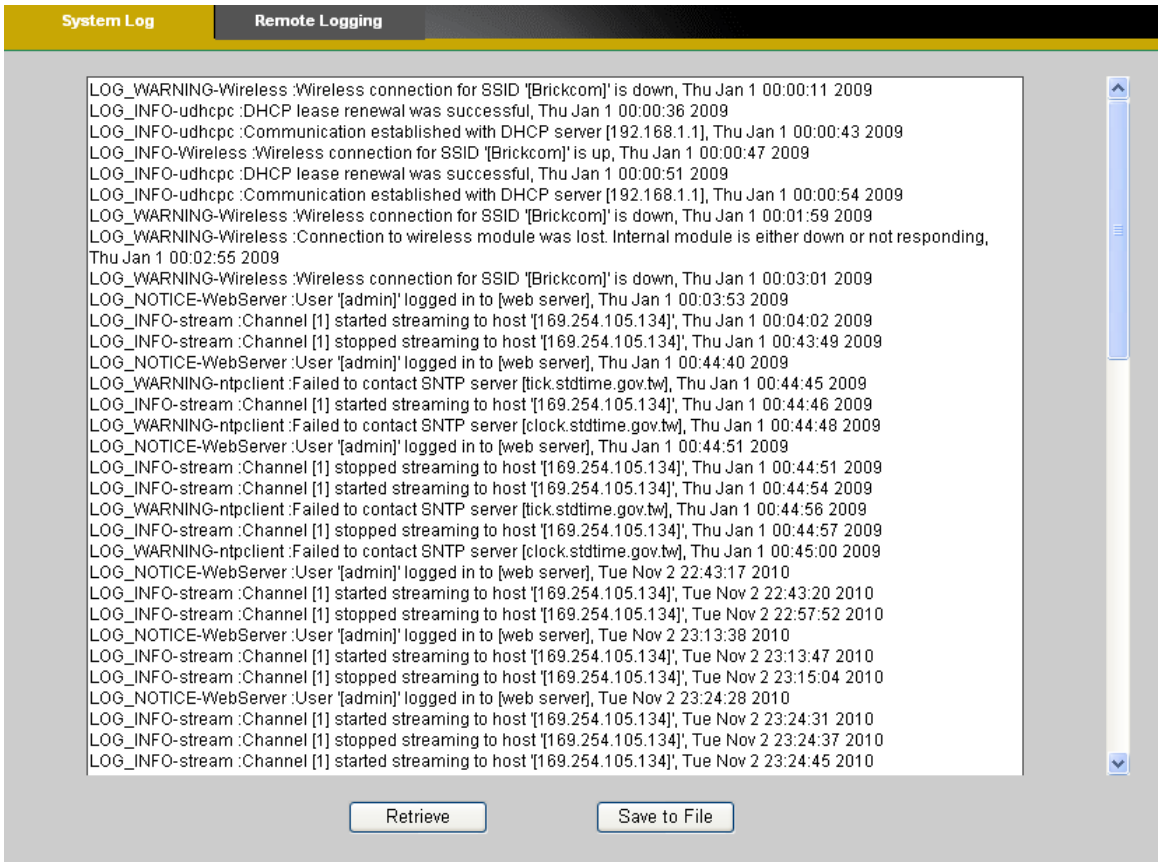
c. **Maximum buffer size** – Specify the maximum file size allowed.

Click **Apply** to apply settings or **Cancel** to cancel changes.

8.6 System

8.6.1 System Log

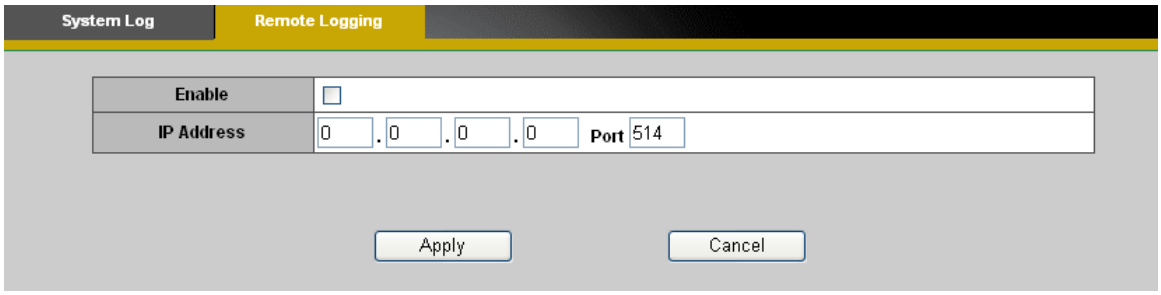
a. **System Log** – Set up the camera to record a system log when an event is triggered.



This page displays the system's log in chronological order. The system log is stored in the camera's buffer area and will be overwritten when the buffer area is full.

Click **Retrieve** to retrieve the log or click **Save to file** to save the system log.

b. **Remote Logging** - The user can configure the camera to send the system log file to a remote server as a log backup.



i. Click to enable remote log and enter the IP address of the remote server.

ii. Enter the port number of the remote server.

Click **Apply** to apply settings or **Cancel** to cancel changes.

8.6.2 Date and Time

a. **Manual** – Manually enter the date and time.

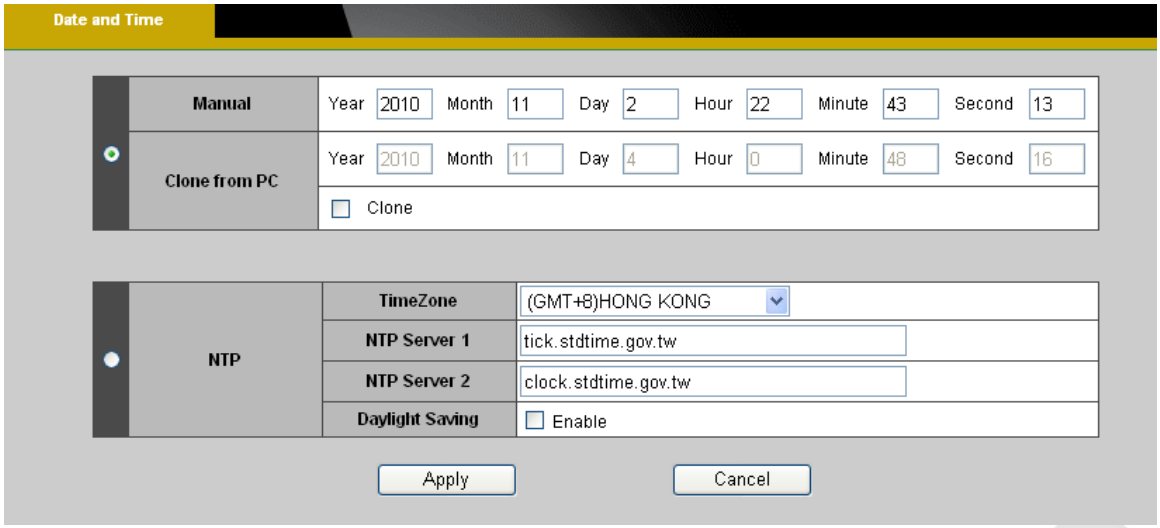
b. **Clone from PC** – The camera will sync with the time, date and time zone of the computer used to modify the camera settings. Check "Clone" to utilize this option. The read-only date and time of the PC will be displayed.

c. **NTP (Network Time Protocol)** - NTP is a protocol for synchronizing the clocks of a computer system. Select to update the time with a NTP server on an hourly, daily, weekly, or monthly basis.

   i. Time Zone – Select the local time zone from drop-down menu.

   ii. NTP Server 1 and Server 2 - Enter the address of the NTP server

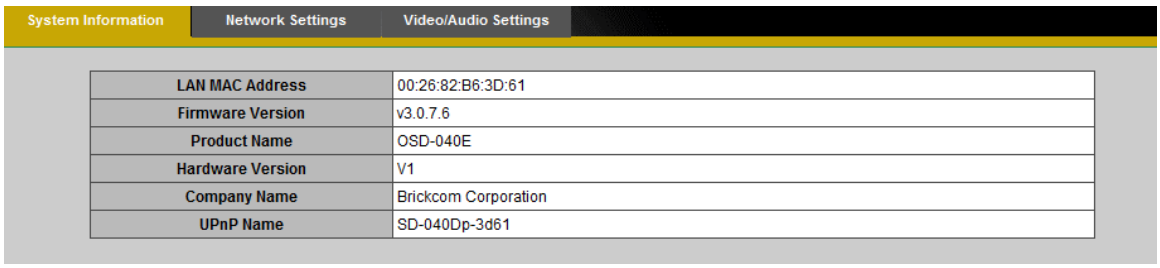
   iii. Daylight Saving - Enable this option to automatically update for Daylight Savings Time.



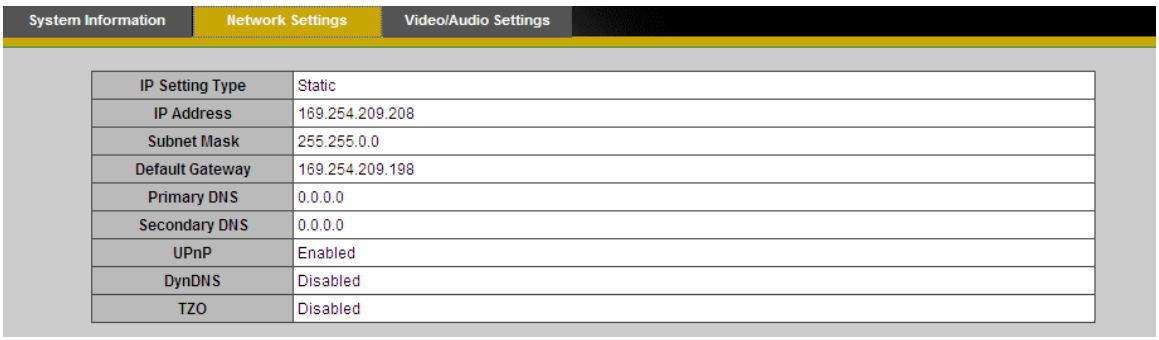
Click **Apply** to apply settings or **Cancel** to cancel changes.

8.6.3 Device Information

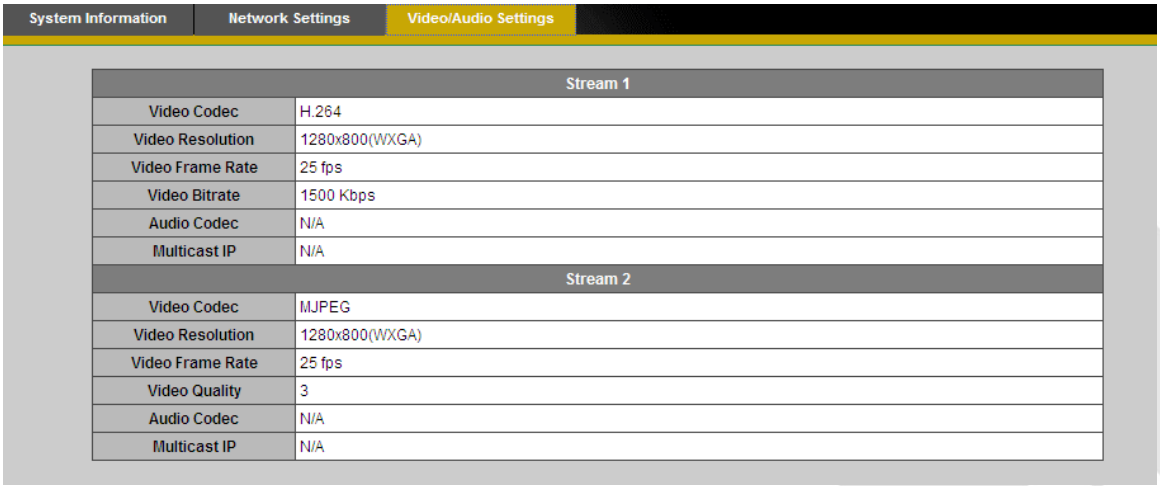
a. **System Information** – Displays the complete system information of the camera.



b. **Network Settings** – Displays the complete network settings information of the camera.



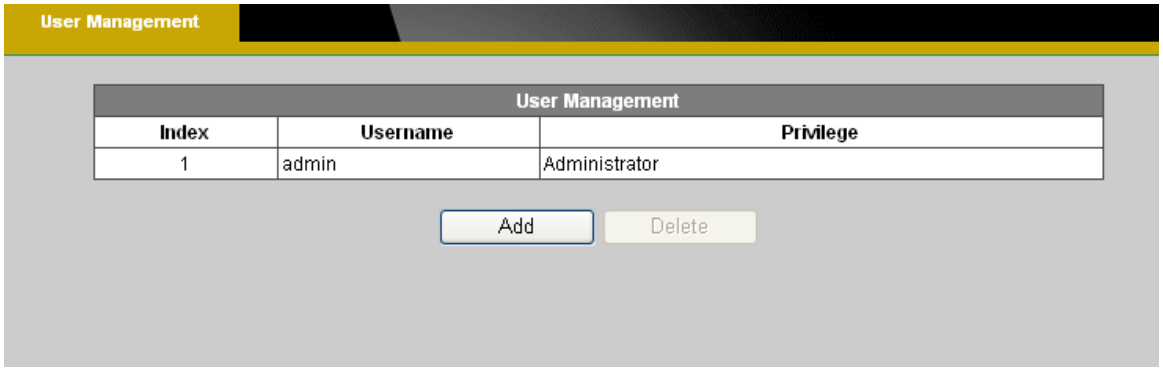
c. **Video/Audio Settings** – Displays the complete video/audio settings information of the camera.



8.7 Maintenance

8.7.1 User Management

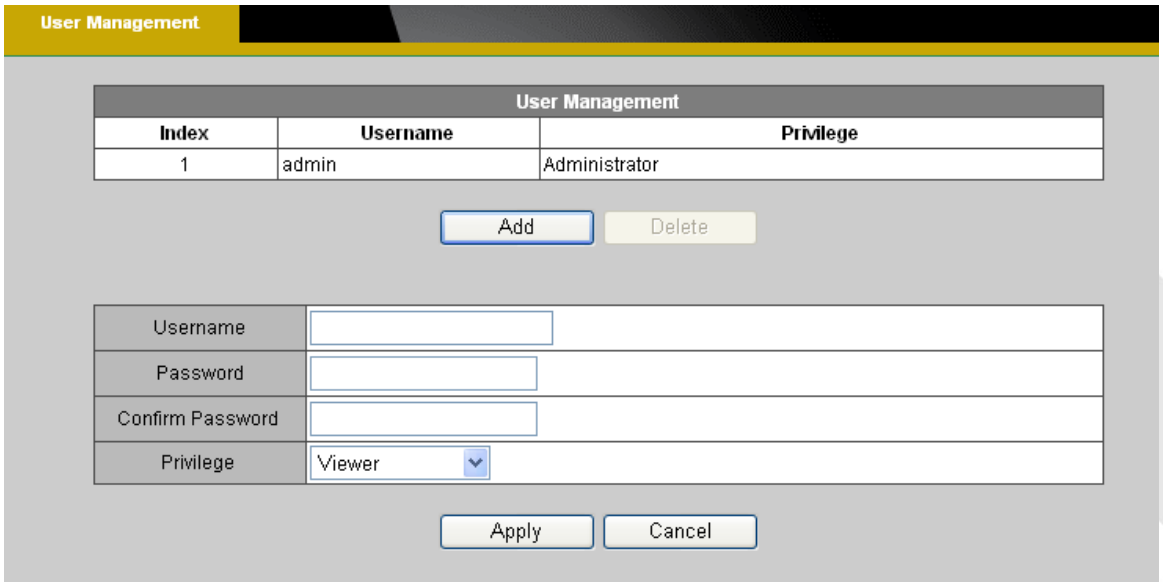
This section explains how to enable password protection and create multiple accounts. The administrator account name is “admin”, which is permanent and cannot be deleted.



a. Click Add to create an account.

b. Enter the new user’s name, password and confirm password. Administrators can add up to 10 user accounts.

c. Select the privilege level for the new user account from the drop-down list. Privilege levels can be assigned as:



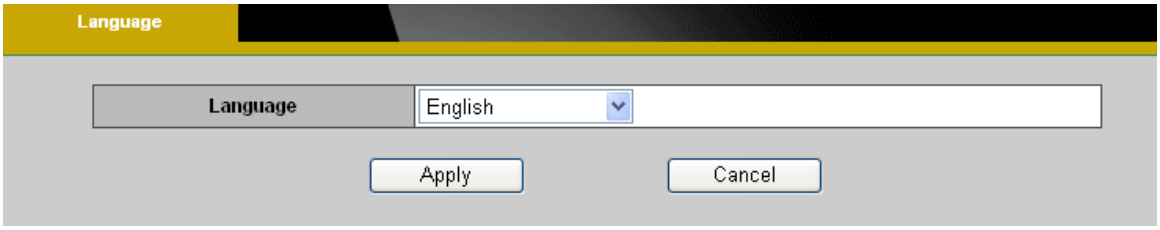
i. Administrator - user has access to view and change the Configuration page. Users with administrator privilege can change other user's access rights and user accounts. Click **Delete** or **Update** to delete or modify a user's account.

ii. Viewer - user can only access the main page for live viewing.

iii. Remote Viewer - user can only access the main page for live viewing using TCP protocol.

Click **Apply** to apply settings or **Cancel** to cancel changes.

8.7.2 Language

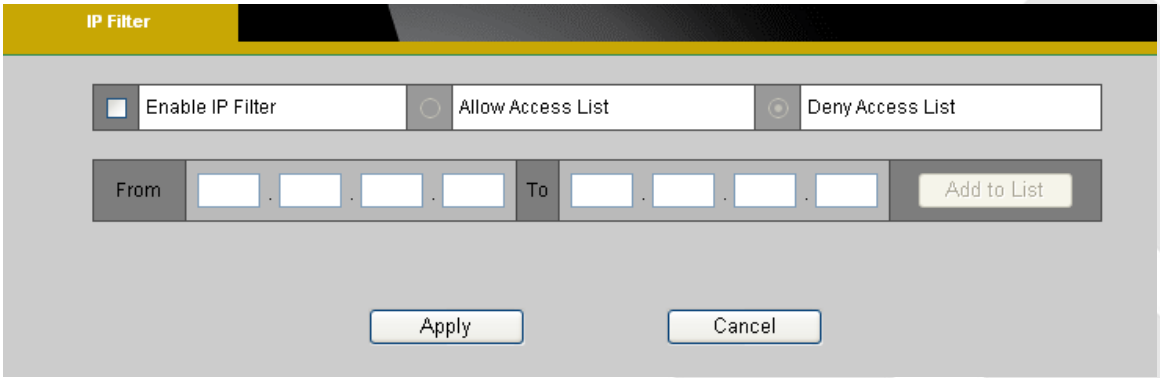


Select the desired language from the drop-down menu.

Click **Apply** to apply settings or **Cancel** to cancel changes.

8.7.3 IP Filter

The IP Filter is used to filter the IP addresses which are able to access the network camera. Enable the IP Filter and select to allow or deny a range of IP addresses access to the server. Click **Add to list** to add the IP range to the IP filter list.

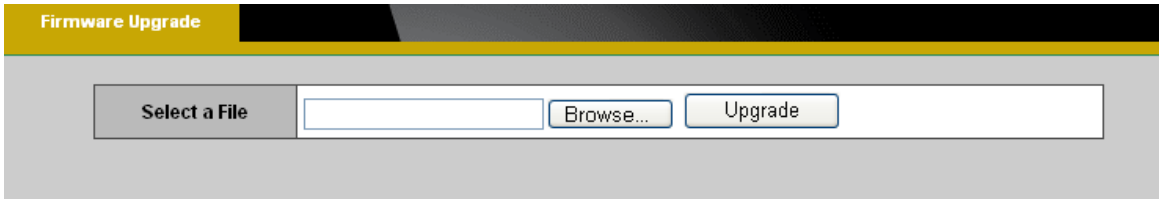


Click **Apply** to apply settings or **Cancel** to cancel changes.

8.7.4 Firmware Upgrade

This feature allows the user to upgrade the camera firmware. It will take a few minutes to complete the process.

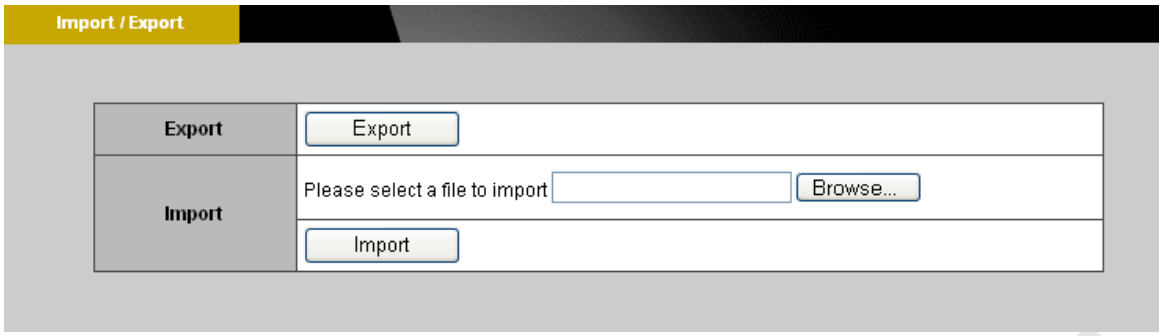
NOTE - Do not power off the camera or camera during the upgrade.



a. **Upgrade** - Click Browse… and specify the firmware file. Click Upgrade. The camera will begin upgrading and will reboot automatically when the upgrade is finished.

8.7.5 Configuration

This feature allows the user to export/import the configuration files of the network camera.



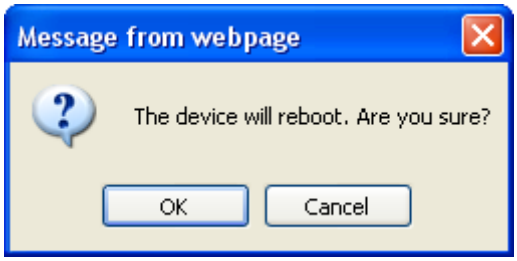
a. **Import/Export** - Click **export** to pop up a dialog to indicate the location and file to export. Click **browse** to indicate the location and file of the camera configuration and click **import** to import the configuration file back into the network camera.

8.7.6 Reset to Default

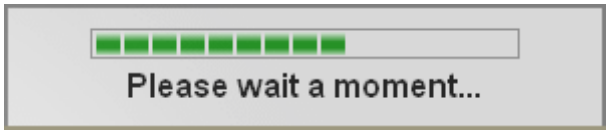
Click **Apply** to restore the network camera to factory default setting.

8.7.7 Reboot

This feature will reboot the camera. Click **Apply** to begin. A message will pop up asking "The device will reboot. Are you sure?" Click "OK" to continue. The camera will take about one minute to reboot.



The following message will show during the rebooting process.



When completed, the live video page will be displayed in the web browser.